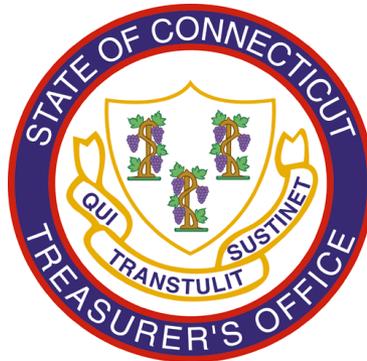


Office of Connecticut State Treasurer Denise L. Nappier



2017 Public Finance Outlook Conference

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- **Protecting Your Town from Cyber Hacking and Theft** **Page 91**

Short-Term Investment Fund
22nd Annual Investors Meeting
March 29, 2017



Michael M. Terry, CFA
Principal Investment Officer
Cash Management Division

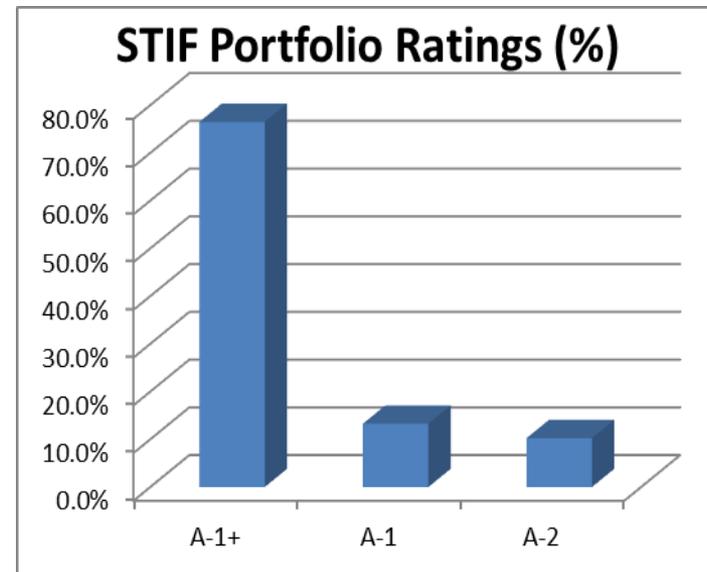
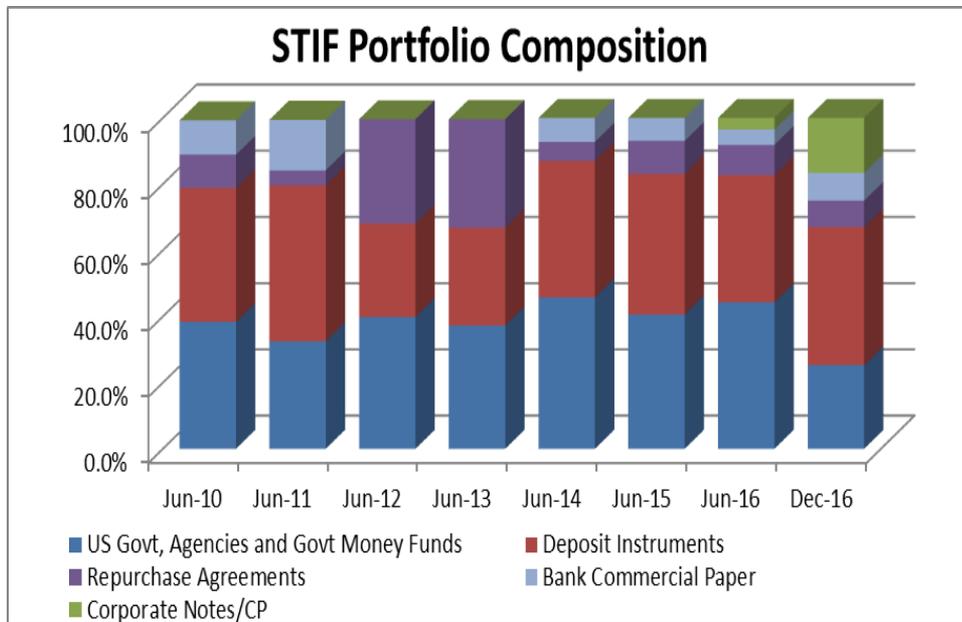
Primary Objectives

STIF's mandate is to provide:

- Safety
- Liquidity
- Yield

Short-Term Investment Fund – Safety

Conservative Portfolio Composition



A-1+ amount includes repurchase agreements with banks rated A-1 or better

- The STIF portfolio remains conservative with a focus on government/agency, bank and highly rated corporate issuers.
- A-1 and A-2 rated investments average a 1 day maturity and all A-2 investments are backed by a letter of credit from a Federal Home Loan Bank.

Short-Term Investment Fund – Safety

Conservative Portfolio Composition

STIF Top Ten Holdings		
Issuer	Ratings	Percent of Total Portfolio
Federal Farm Credit	Aaa/AA+ (P-1/A-1+)	9.9%
Federal Home Loan Bank	Aaa/AA+ (P-1/A-1+)	6.6%
Royal Bank of Canada	Aa3/AA- (P-1/A-1+)	6.2%
DZ Bank	Aa1/AA- (P-1/A-1+)	4.5%
Nordea Bank	Aa3/AA- (P-1/A-1+)	4.5%
Scotia Bank	Aa3/A+ (P-1/A-1)	4.5%
Merrill Lynch Repo	A+/A-1	4.5%
Natl. Securities Clearing Corp	Aaa/AA+ (P-1/A-1+)	4.5%
Microsoft Corp	Aaa/AAA (P-1/A-1+)	4.3%
Federated Money Market Fund	AAAm	<u>4.2%</u>
		53.5%

➤ STIF has been actively diversifying the portfolio across markets while only investing in the strongest issuers.

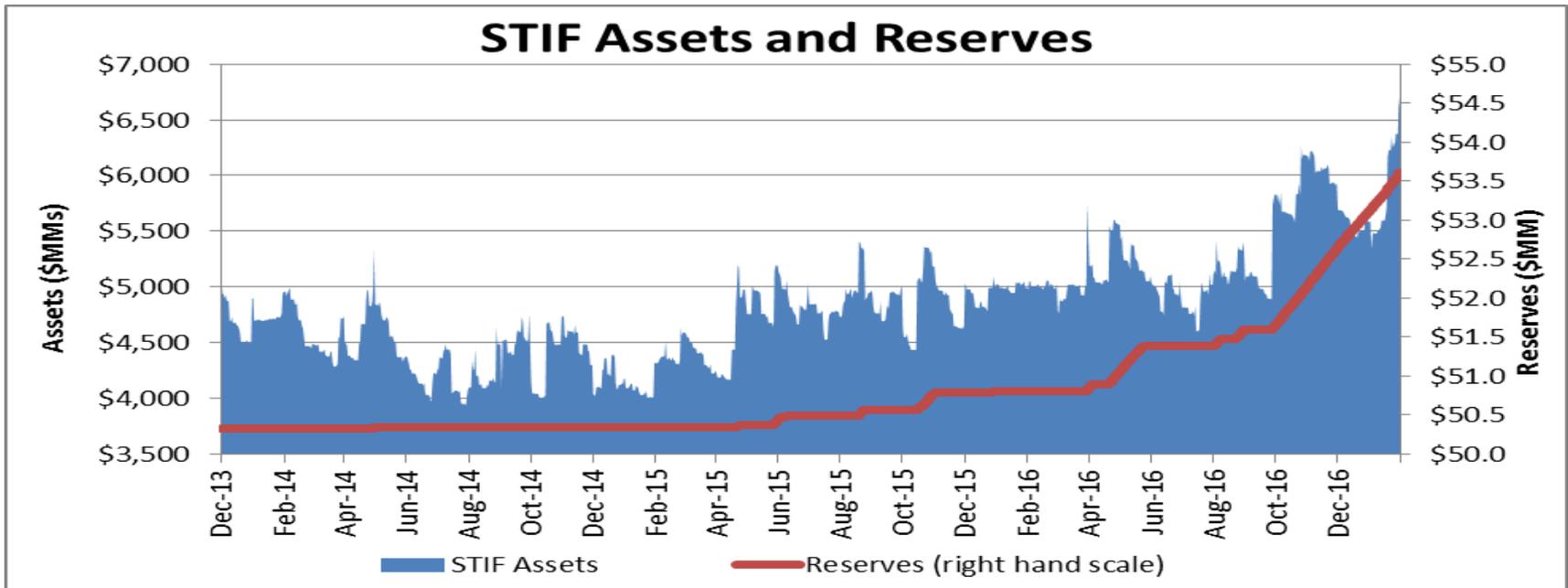
As of January 31, 2017

Ratings: Moody's/S&P

RBC includes corporate/CP (\$145mm) and Repo (\$200mm)

Short-Term Investment Fund – Safety

Designated Surplus Reserve



Contributions to reserves:

- \$904 thousand during Fiscal 2016
- \$2.2 million Fiscal 2017 to date (1/31/17)
- \$2.8 million over the last 12 months (1/31/16 – 1/31/17)

Short-Term Investment Fund – Safety

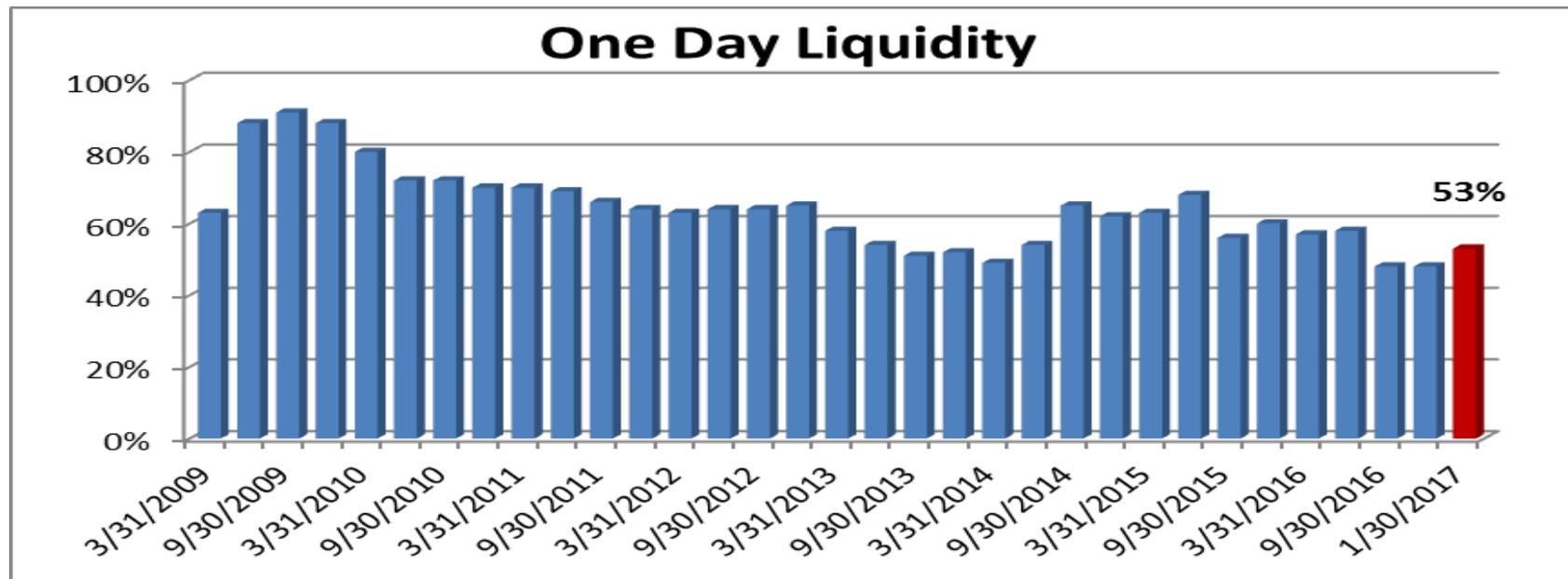
Regular Stress Testing

PORTFOLIO SENSITIVITY MATRIX (Price due to interest rate and credit spread movement)					
Valuation Date:		2/6/2017			
Current NAV		1.000246404			
Credit Spread Increase	20 bps	50 bps	60 bps	75 bps	100 bps
Rate Increase = 0	1.0002	1.0001	1.0000	1.0000	0.9999
50 bps	1.0000	0.9999	0.9999	0.9998	0.9997
75 bps	0.9999	0.9998	0.9998	0.9997	0.9996
100 bps	0.9999	0.9997	0.9997	0.9997	0.9996
150 bps	0.9997	0.9996	0.9996	0.9995	0.9994
200 bps	0.9995	0.9994	0.9994	0.9993	0.9992

- STIF's portfolio is tested monthly under various interest rate scenarios, changes in risk premiums and investor redemptions.
- The portfolio consistently proves resilient to changes.

Short-Term Investment Fund – Liquidity

Significant Liquidity

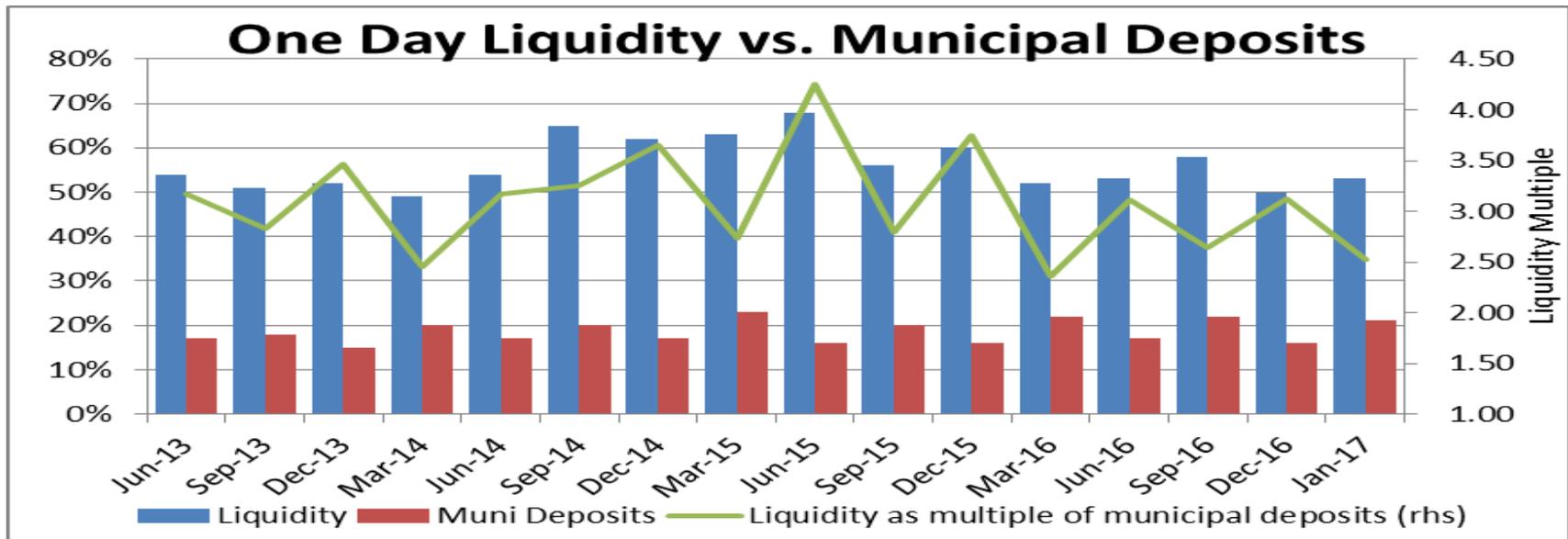


Overnight Investments or investments that are available on a same-day or next-day basis.

- As of January 31, 2017, one-day liquidity stood at 53 percent of the portfolio.

Short-Term Investment Fund – Liquidity

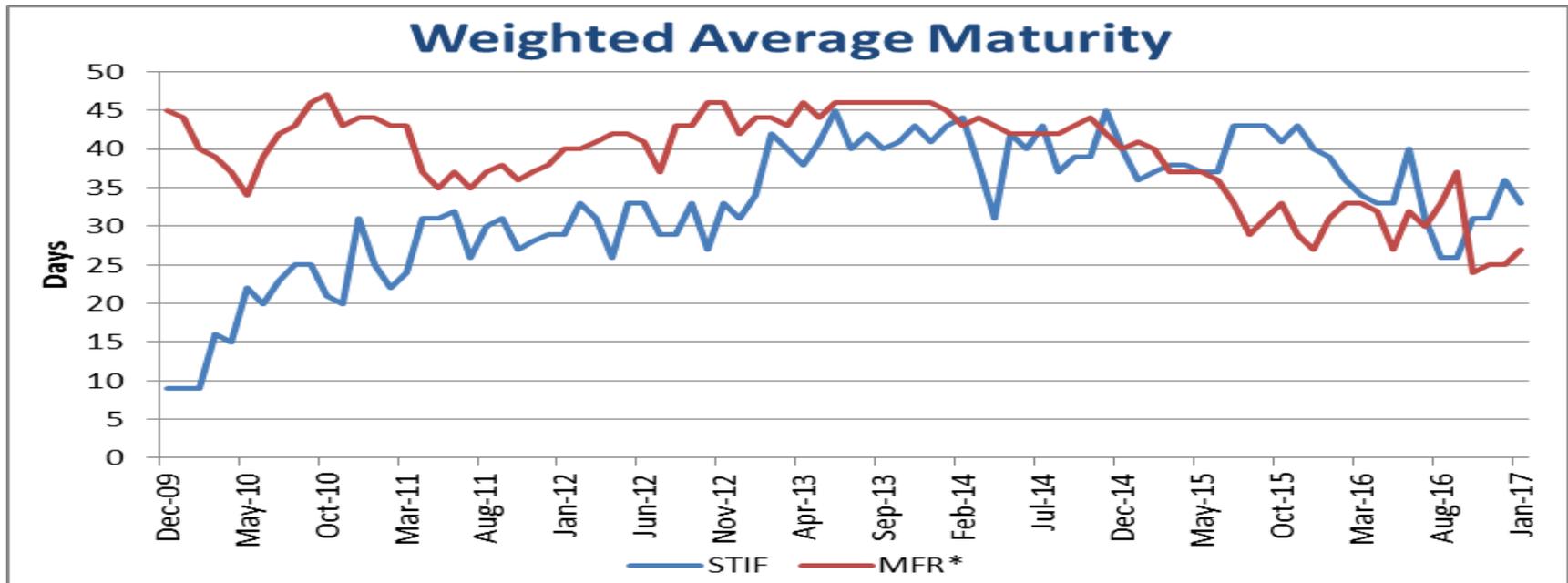
Investor Composition



- The State Treasury continues to be the single largest investor in STIF.
- Local governments, with approximately \$1.3 billion in STIF deposits, represented 21% of the fund as of January 31, 2017.
- One day liquidity was approximately 2.5x municipal deposits.

Short-Term Investment Fund – Liquidity

Weighted Average Maturity

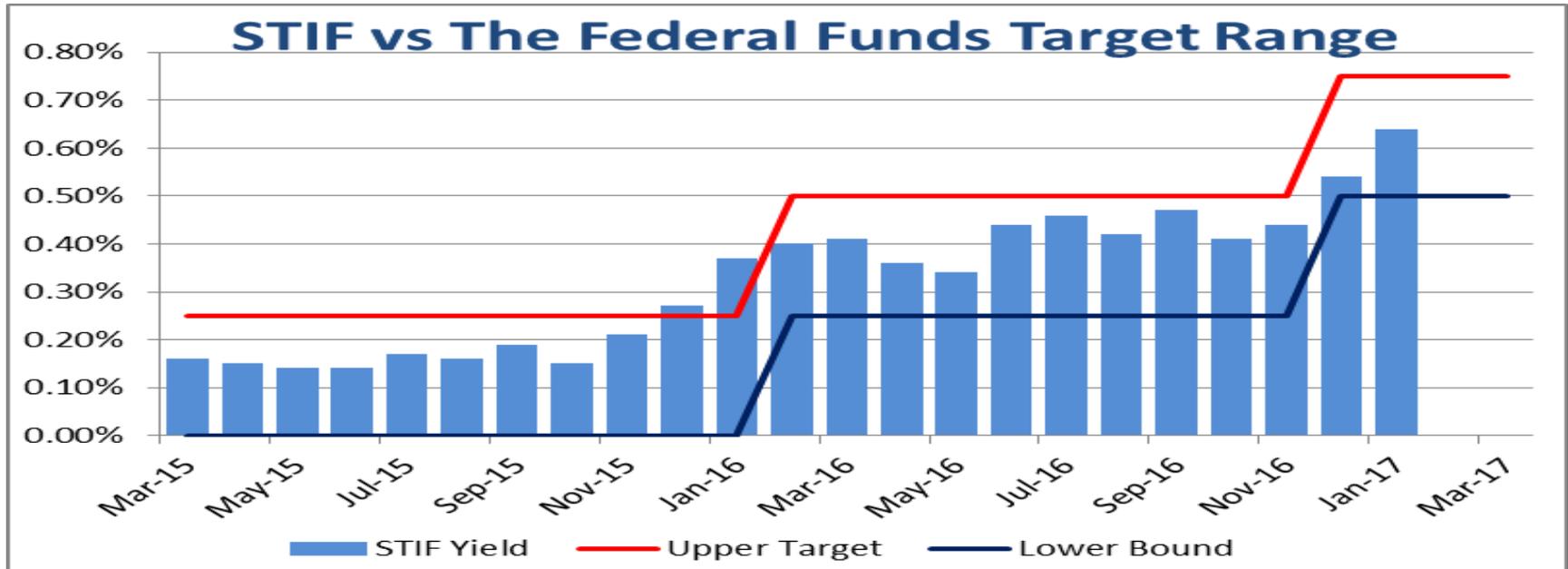


* IMoneyNet's First Tier Institutions-Only AAA-Rated Money Fund Report (MFR) Averages Index.

- STIF's WAM, at 33 days, remains conservative and well below its guidelines and AAAM fund requirements.

Short-Term Investment Fund - Yield

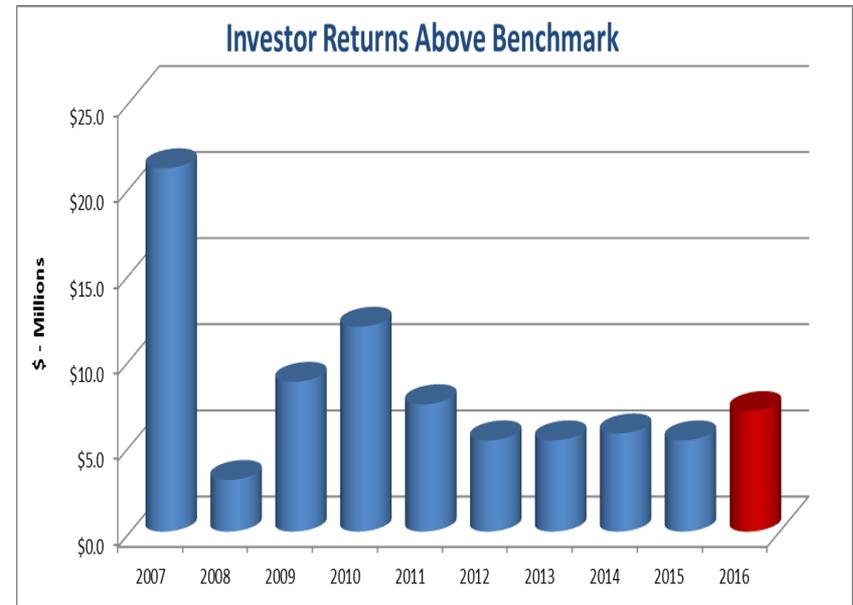
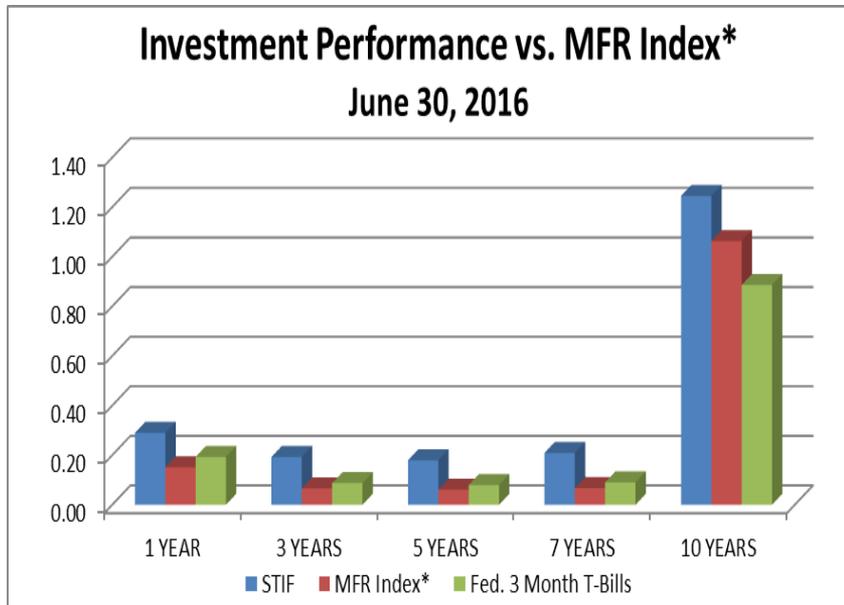
Recent Performance



- STIF has kept pace with the increases to the Federal Funds target range.

Short-Term Investment Fund – Performance

Period ending June 30, 2016



* IMoneyNet's First Tier Institutions-Only AAA-Rated Money Fund Report (MFR) Averages Index.

- During FY 2016, STIF outperformed our benchmark by 14 bps.
- Returned an additional \$7.0 million to investors above the benchmark.
- During the Nappier administration, STIF has provided investors with over \$200 million in additional income.

Short-Term Investment Fund

Recent Performance

- For Calendar Year 2016, STIF outperformed benchmark by 16 bps (0.42% vs. 0.26%), thereby earning an additional \$8.2 million for investors.
- Fiscal year-to-date (1/31/2017), the average rate on STIF was 15 basis points higher than the average rate on the benchmark (0.48% vs 0.33%), thereby earning an additional \$4.9 million for investors.

Market Report

Overview

- The shift from monetary policy to fiscal policy is currently underway with monetary policy becoming tighter and fiscal policy proposals becoming the driver.
- Risk has shifted from financial to political/geopolitical, the latter being harder to model and/or determine the effects on markets.

Market Report

Federal Funds

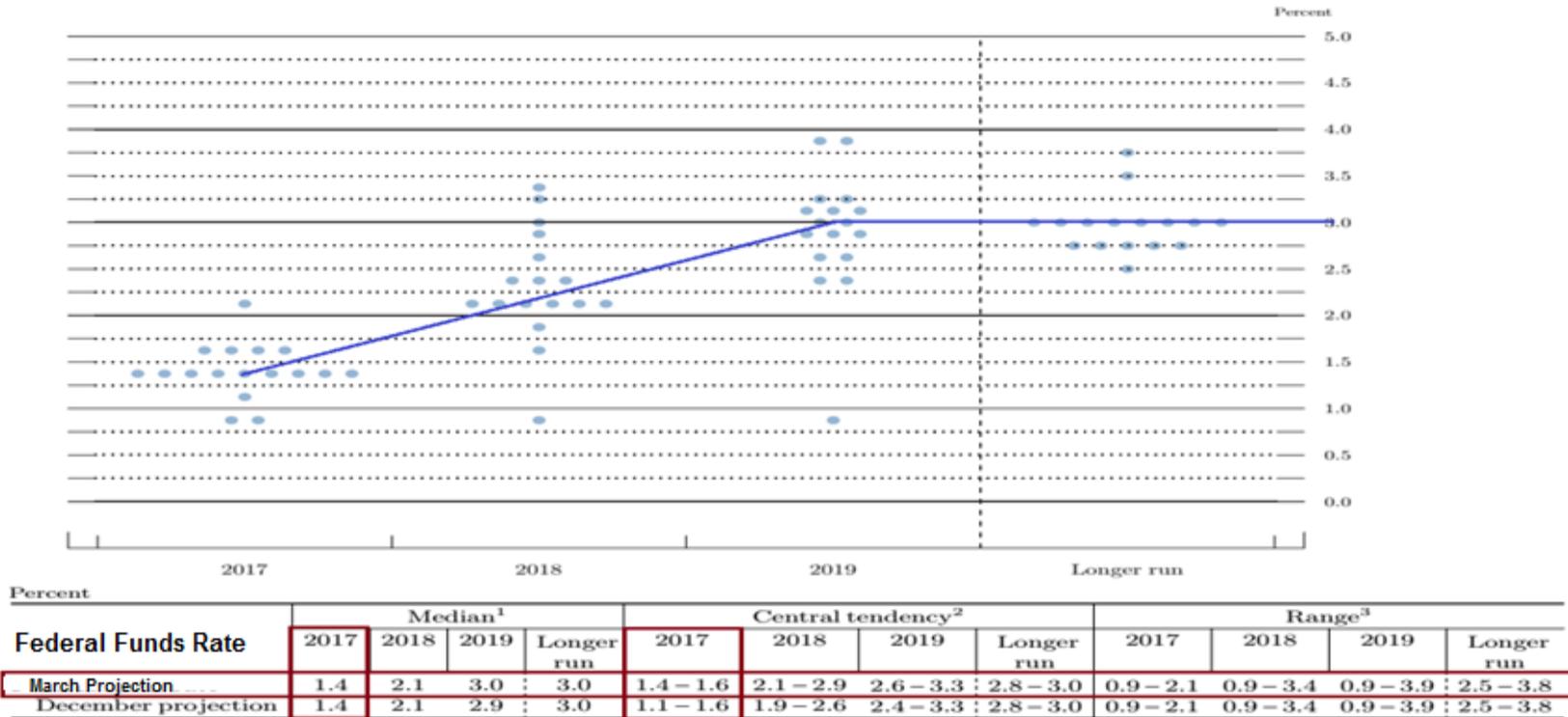
FOMC Meeting Date	Prob of Hike	Current Implied Probabilities							
		1-1.25	1-1.25 or Greater	1.25-1.5	1.25-1.5 or Greater	1.5-1.75	1.75-2	2-2.25	2.25-2.5
5/3/2017	13.30%	13.30%	13.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
6/14/2017	53.50%	47.30%	53.50%	6.20%	6.20%	0.00%	0.00%	0.00%	0.00%
7/26/2017	60.20%	47.20%	60.20%	12.10%	13.00%	0.90%	0.00%	0.00%	0.00%
9/20/2017	79.30%	43.70%	79.30%	28.90%	35.60%	6.30%	0.40%	0.00%	0.00%
11/1/2017	81.00%	41.80%	81.00%	30.20%	39.20%	8.10%	0.90%	0.00%	0.00%
12/13/2017	88.50%	32.70%	88.60%	34.80%	55.90%	16.90%	3.80%	0.40%	0.00%
1/31/2018	89.70%	30.60%	89.80%	34.60%	59.20%	18.70%	5.10%	0.70%	0.10%

Source: Bloomberg world interest rate probabilities

- Based on the futures market's implied probabilities, there is a greater than even chance that the FOMC increases rates in June and December for a total of three hikes in 2017.

Market Report

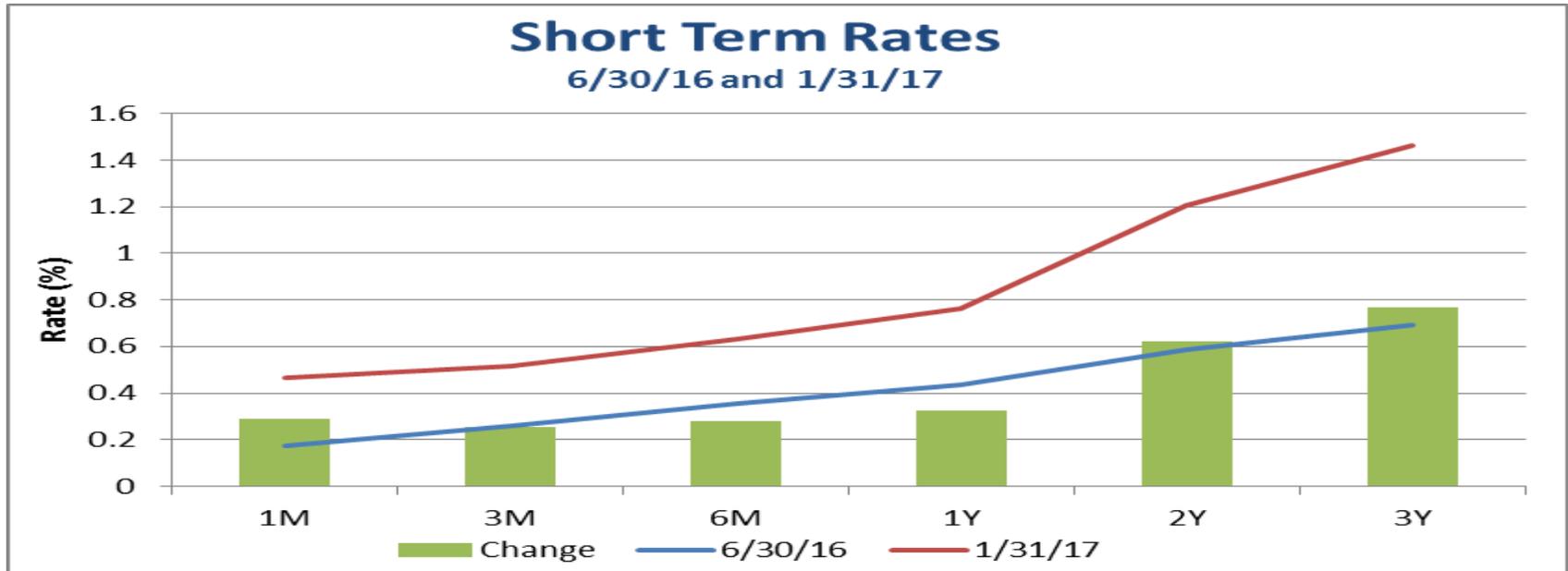
Federal Funds



- The range of forecasts by FOMC members has become narrower.

Market Report

Short-Term Yield Curve



Source: Bloomberg

- Rates have increased and the short-term yield curve has steepened due to Fed policy actions and concerns regarding inflation.

Going Forward

- We believe that there will be approximately two more hikes to the Federal Funds rate during calendar 2017.
- As a result, we are positioning the portfolio in order to capitalize of the rate hikes and measuring prospective investments versus these expectations.
- Credit will continue to play an active role in the portfolio as we determine which risks make the most sense.

Thank you!

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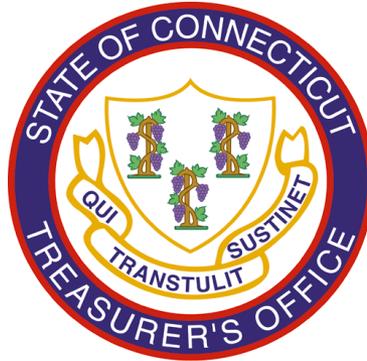
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Office of Connecticut State Treasurer Denise L. Nappier



2017 Public Finance Outlook Conference

Municipal Employees' Retirement Fund Investment Overview March 29, 2017



Laurie Martin, CPA
Interim Chief Investment Officer

Agenda

- Market Overview

- Municipal Employees' Retirement Fund ("MERF") Performance Update
 - ❖ Calendar year 2016 results

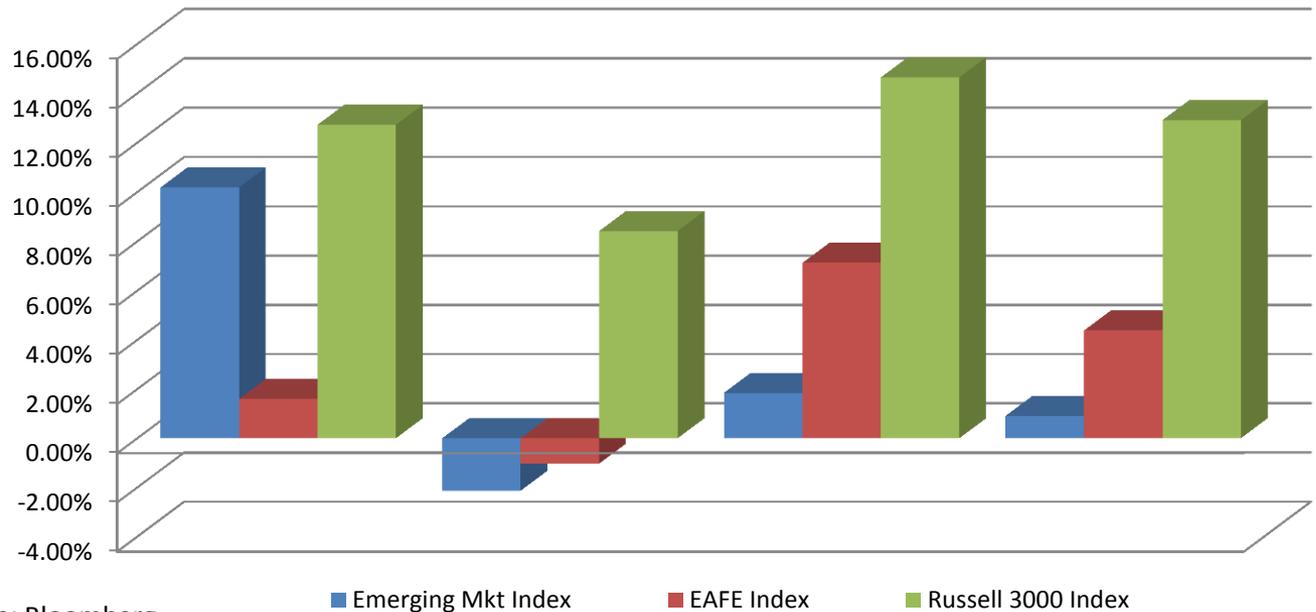
- Liability Profile of MERF

Market Overview

Global Growth Consistently Led by US Equity

MERF Equity Targets

Emerging – 7%
International – 14%
US – 16%



Source: Bloomberg

	1yr	3yr	5yr	7yr
Emerging Markets Equity	10.18%	-2.13%	1.85%	0.91%
International Equity	1.59%	-1.03%	7.13%	4.38%
Domestic Equity	12.72%	8.42%	14.65%	12.91%

Market Overview

Strength of US Dollar Relative to International Currencies

US Dollar Index

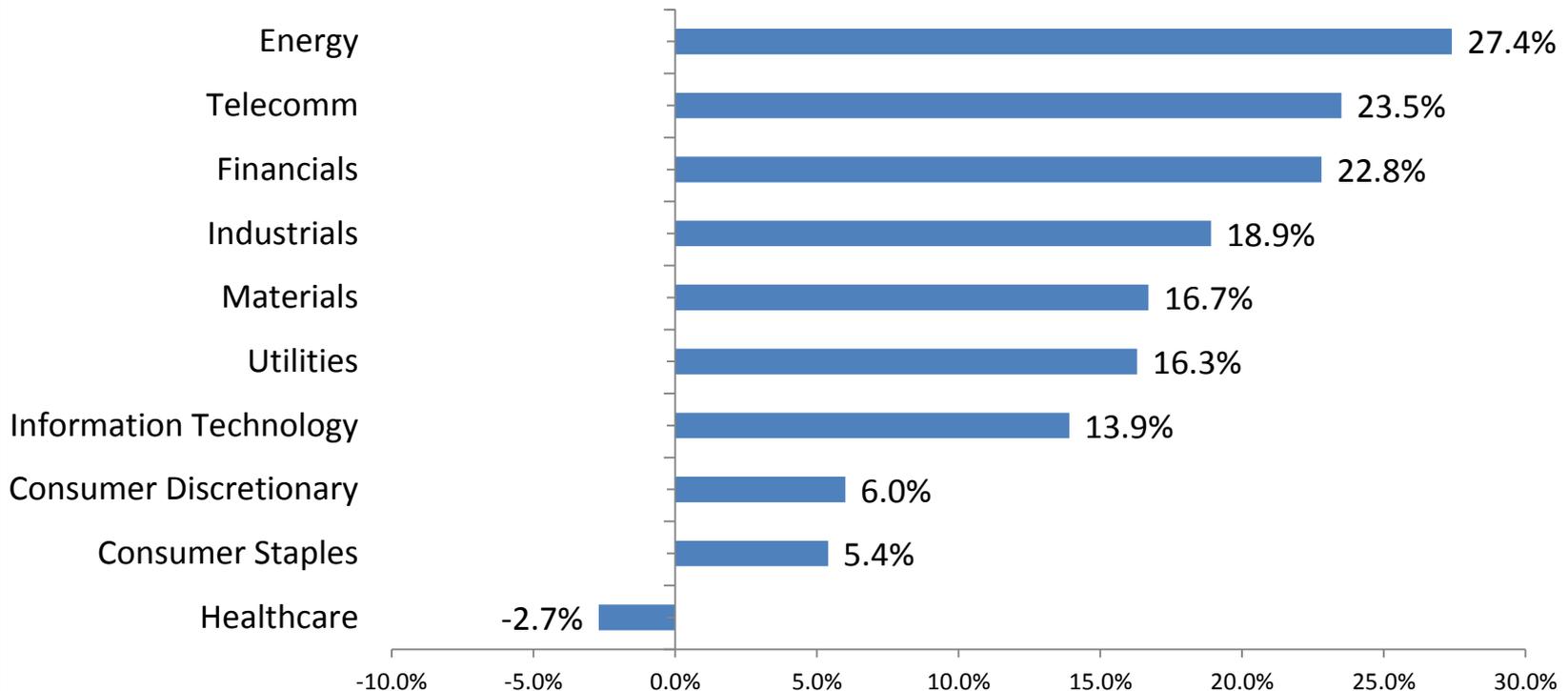


Source: Bloomberg

- Much of the relative outperformance in US equities has been driven by dollar strength
- Local currency returns in non-US developed markets have fared much better
- The non-US developed market equity exposure in MERF has a 50% US dollar hedge which has continued to benefit the portfolio

Market Overview

Improved Economics in the US

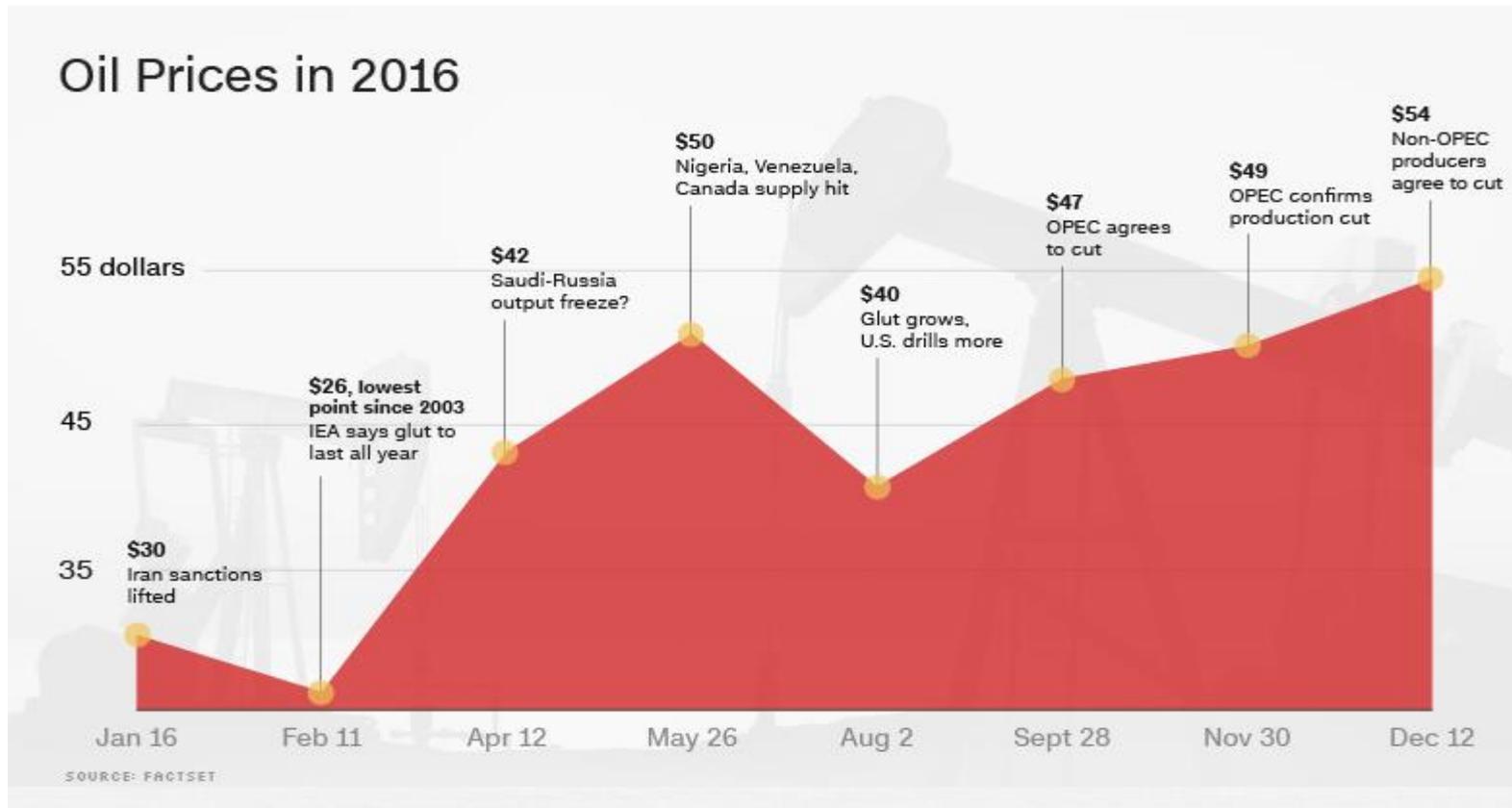


Source: Bloomberg – US Equity Sector returns for Calendar Year 2016

- All S&P 500 sectors, except Healthcare, had positive returns for the year ending December 31, 2016 with Energy performing the best as oil prices stabilized
- Healthcare stocks declined with the uncertainty around policy changes

Market Overview

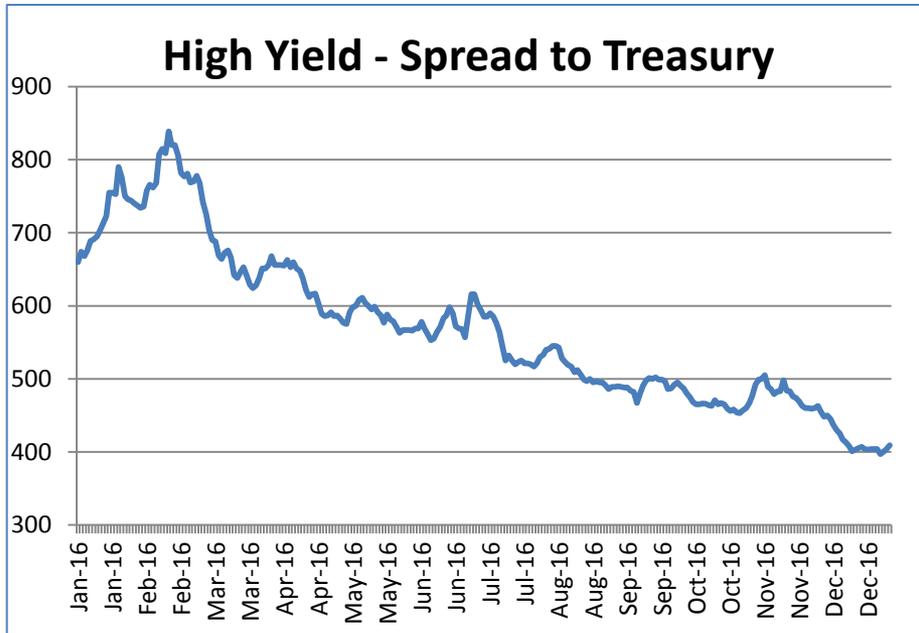
The Rise in Oil Prices



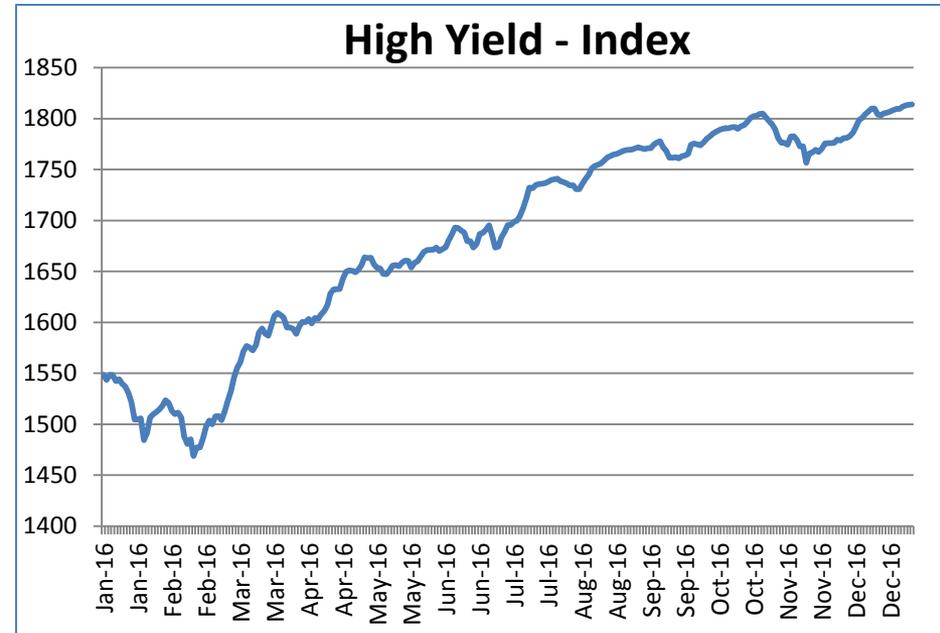
- Strong global oil demand outweighing supply drove prices up approximately 80% during 2016

Market Overview

Strong High Yield Bond Returns Within Fixed Income



Source: Bloomberg



Source: Bloomberg

- High yield bond spreads to Treasuries narrowed further during the year due to oil price rebounds followed by anticipated pro-business initiatives
 - Energy sector represents 17% of this market
 - MERF's High Yield investments returned 15.8% for the year

Market Overview

Fiscal and Monetary Policy Drove Inflation in China

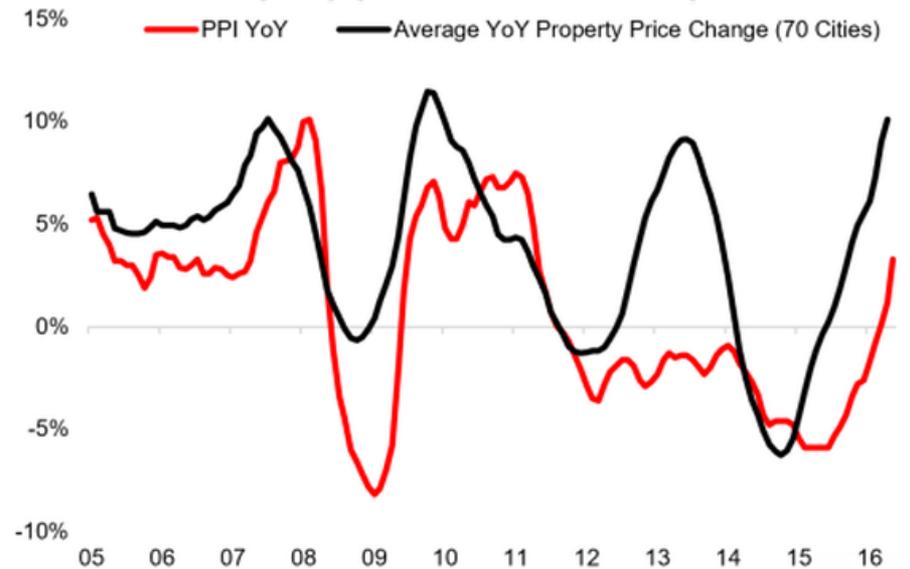
China Stimulus: Fiscal & Monetary



Source: Topdown Charts, Datastream, NBS, PBOC

topdowncharts.com

Property prices vs Producer prices



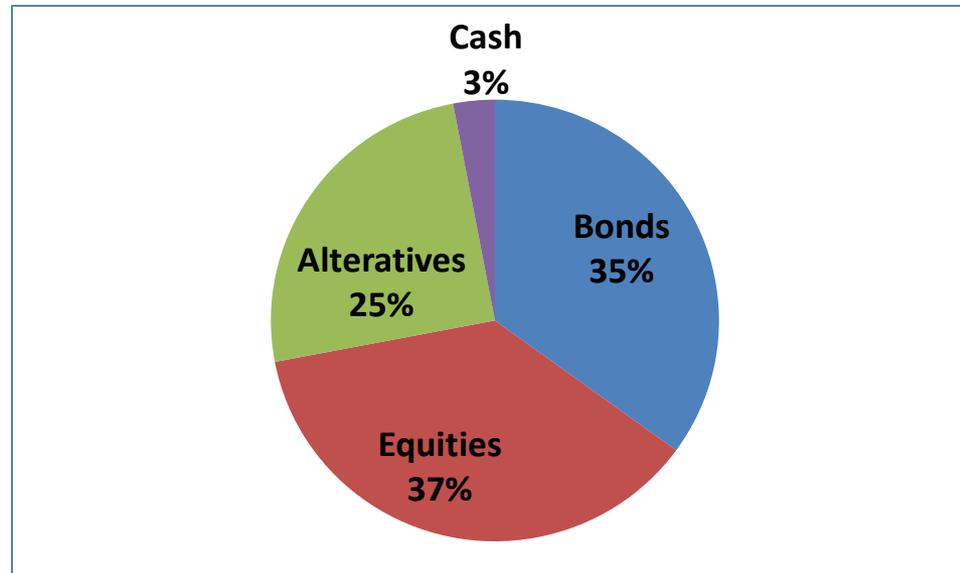
Source: Topdown Charts, Datastream, NBS

topdowncharts.com

- China introduced new stimulus measures to move from deflation to rising inflation in an attempt to grow its economy
- Market volatility continues to be a key concern for this market as China represents 27% of the Emerging Markets index
- MERF's Emerging Markets Equity investments returned 12.9% for the year

Calendar Year 2016 Performance Highlights

MERF Asset Allocation

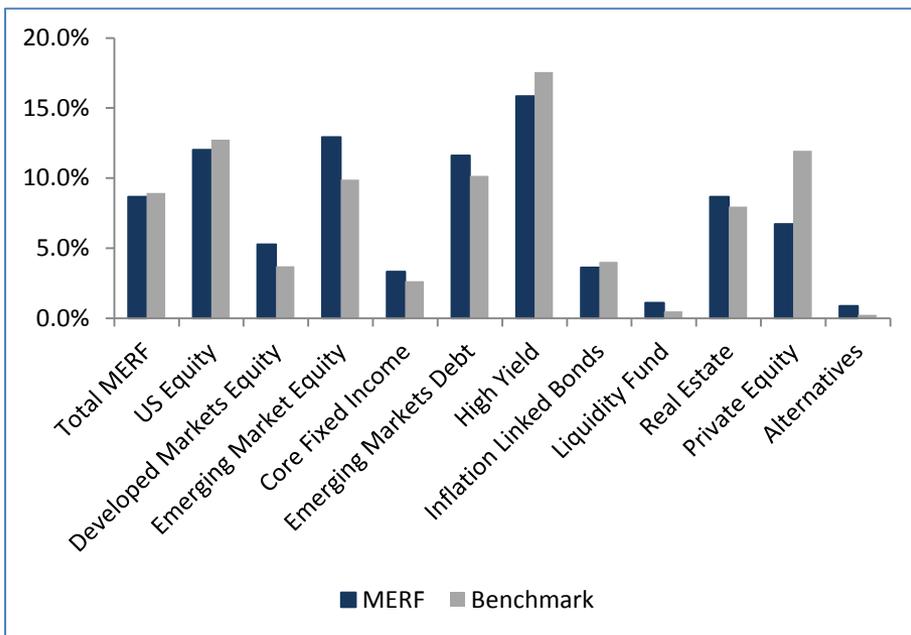


➤ **MERF returned 8.7% net of all fees and expenses vs. 8.9% for the benchmark**

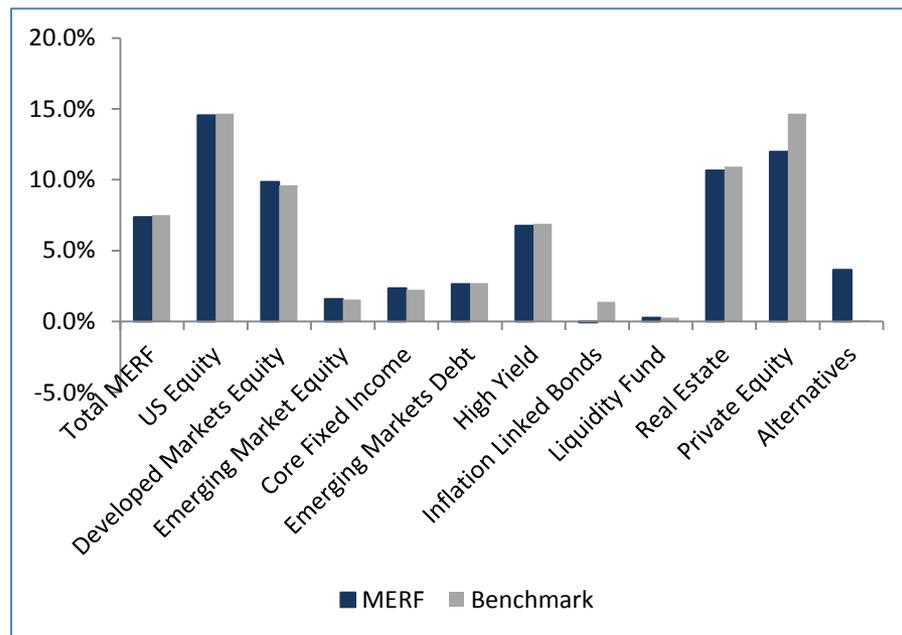
- ❖ Equities outperformed fixed income
- ❖ Strongest performance from emerging markets and US equity as well as high yield bonds

MERF Returns as of December 31, 2016

One Year Returns



Five Year Returns



- **MERF has generated strong performance across all asset classes**
 - ❖ 1 Year Performance: +8.7% vs. +8.9% for the benchmark
 - ❖ 5 Year Performance: +7.4% vs, +7.5% for the benchmark

MERF – Liability Profile

As of June 30, 2016

Liability Position	
	MERF
Active Members	9,373
Retired Members and Beneficiaries	7,102
Actuarial Value of Assets (mil.)*	\$2,445.5
Actuarial Value of Liabilities (mil.)*	\$2,840.3
Unfunded Actuarial Accrued Liabilities (mil.)	\$394.8
Funded Status	86.1%
Return Assumption	8.00%

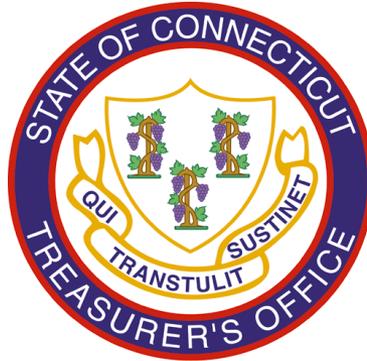
* The actuarial valuation is conducted every two years. These numbers are based on the last valuation which took place in 2016. The next valuation is scheduled for 2018.

Source: Connecticut Municipal Employees Retirement System Actuarial Valuation Report
Prepared as of June 30, 2016 by Cavanaugh Macdonald, dated January 12, 2017



Thank you!

Office of Connecticut State Treasurer Denise L. Nappier



2017 Public Finance Outlook Conference

More of the Same Yet Everything Seems Different: Connecticut Labor Market Overview and Outlook

Patrick J. Flaherty

Assistant Director of Research and Information
Connecticut Department of Labor

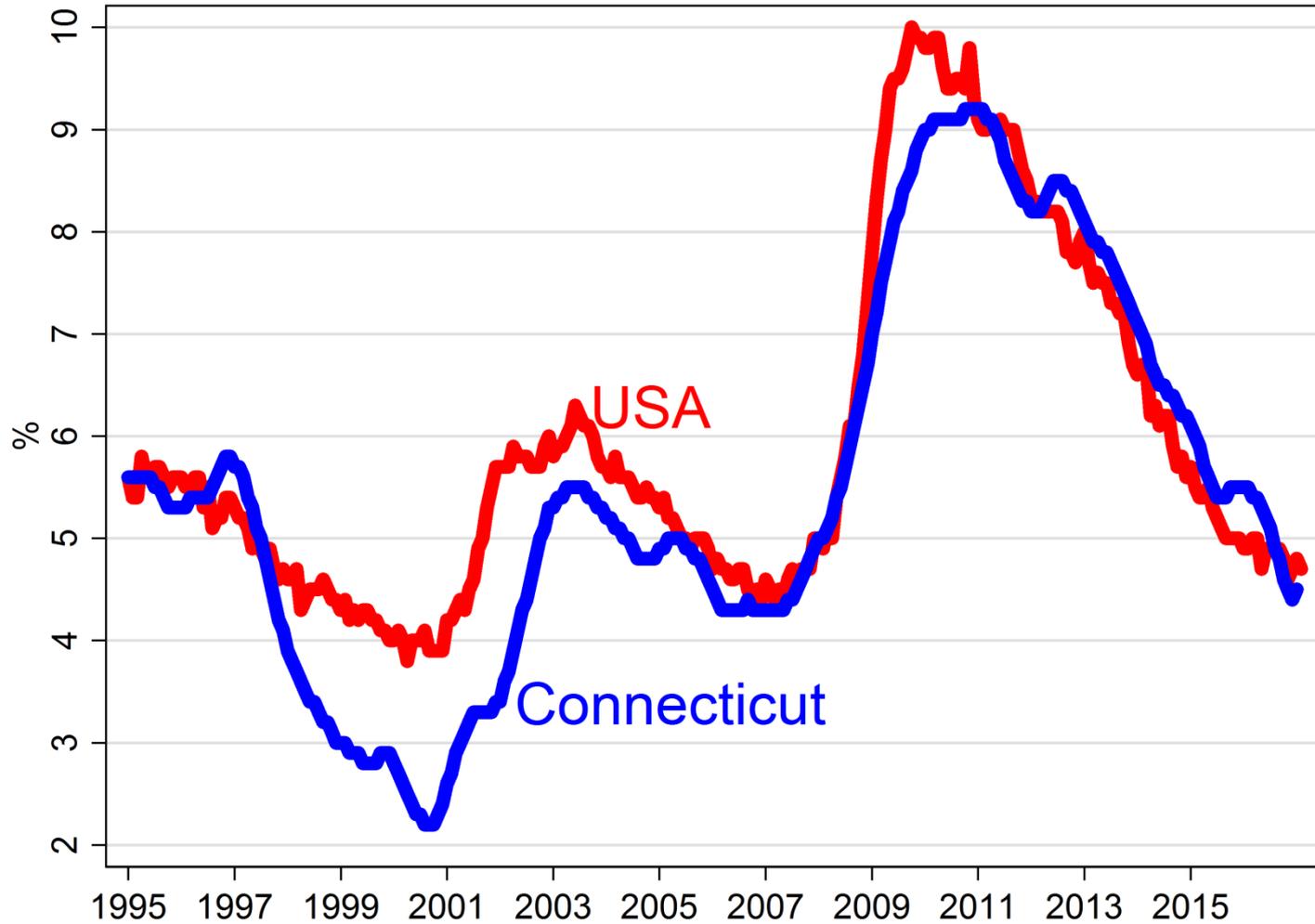
Office of the State Treasurer
Public Finance Outlook Conference
East Hartford, Connecticut
March 29, 2017



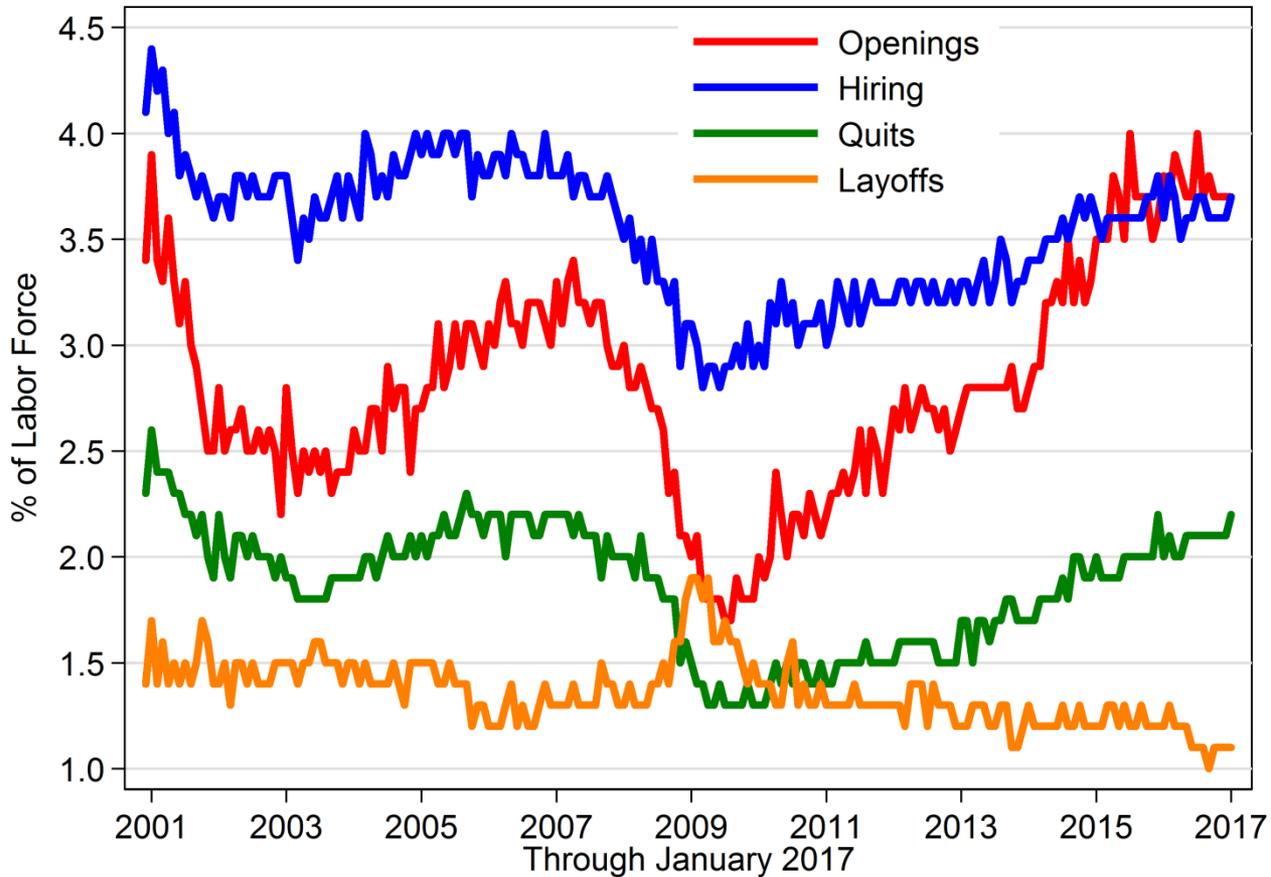
“Nothing up my sleeve, nothing in my hat—what do you expect in this economy?”

CONNECTICUT AND THE NATION

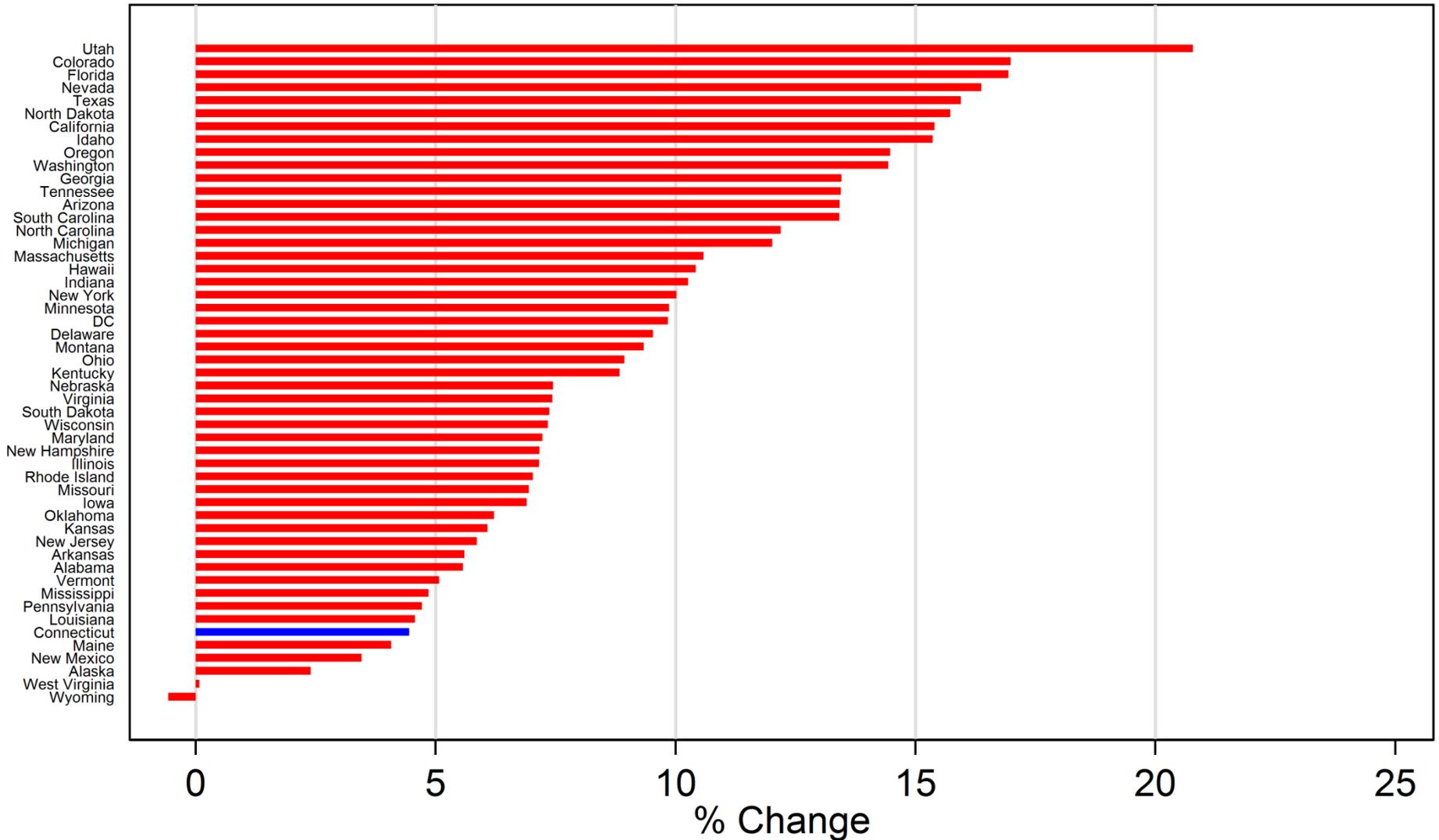
Unemployment Rate



U.S. Employment Indicators

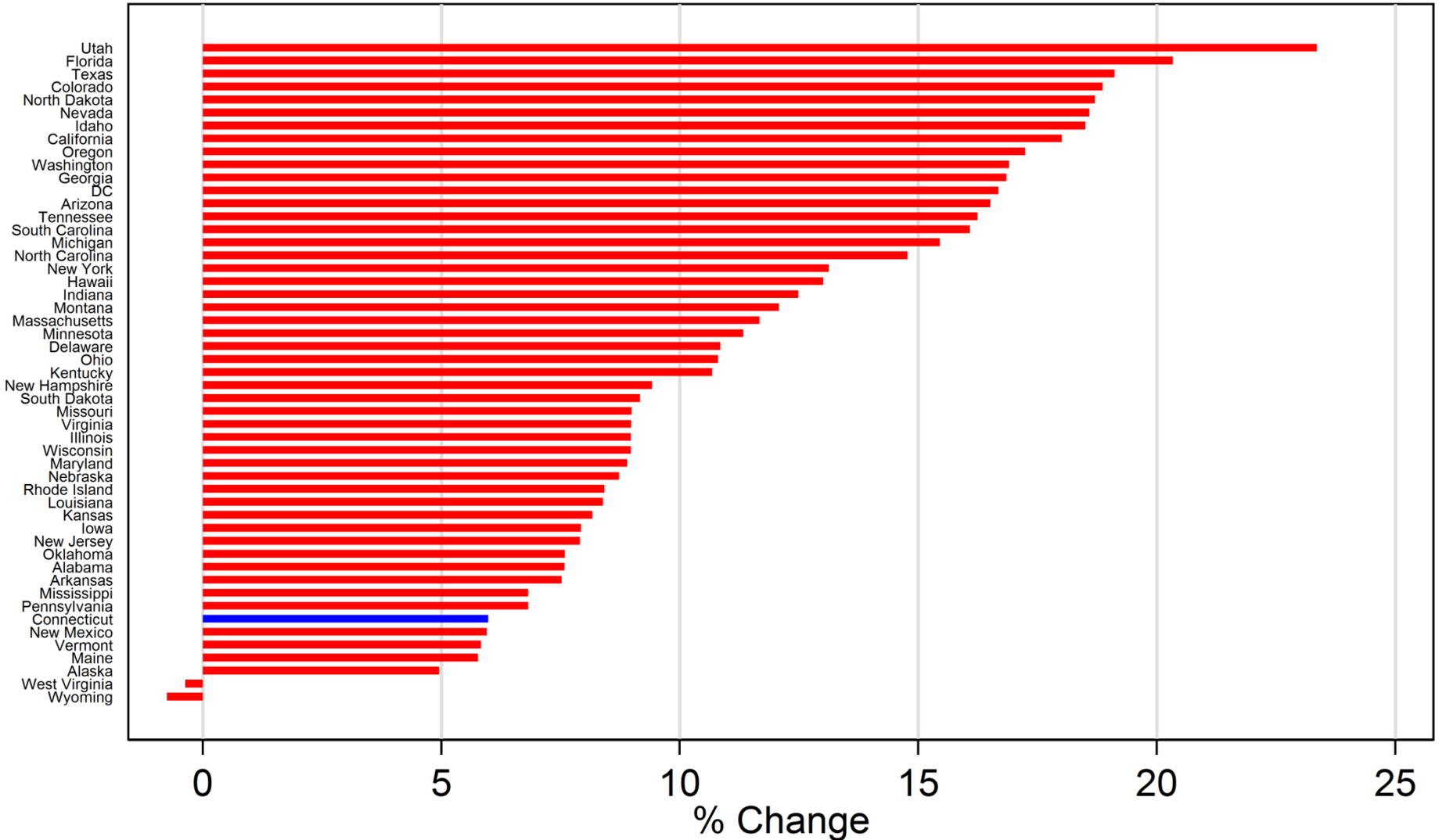


Total Employment 2010 to 2016



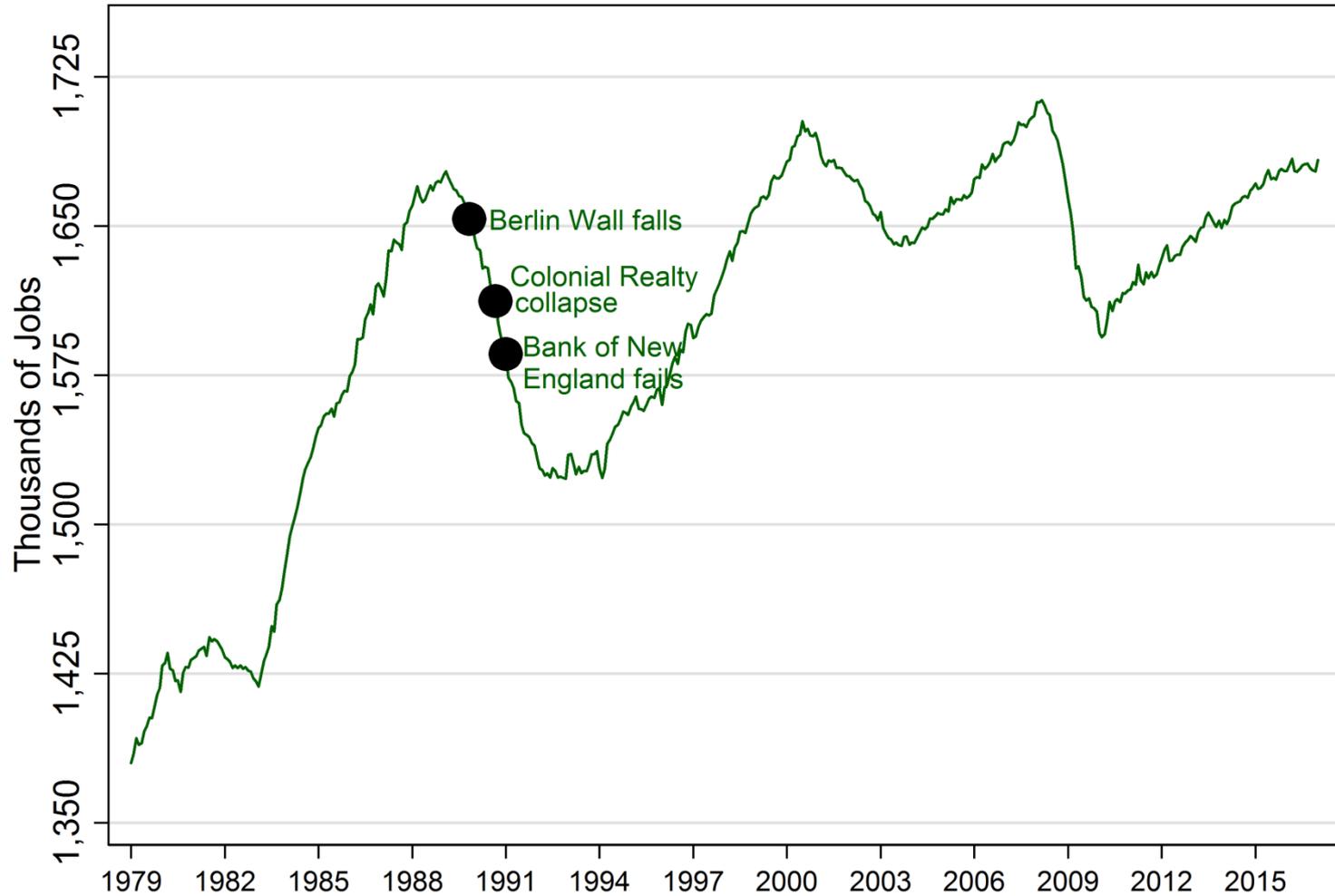
Source: BLS Current Employment Statistics

Private Sector Employment 2010 to 2016



Source: BLS Current Employment Statistics

Connecticut Payroll Employment

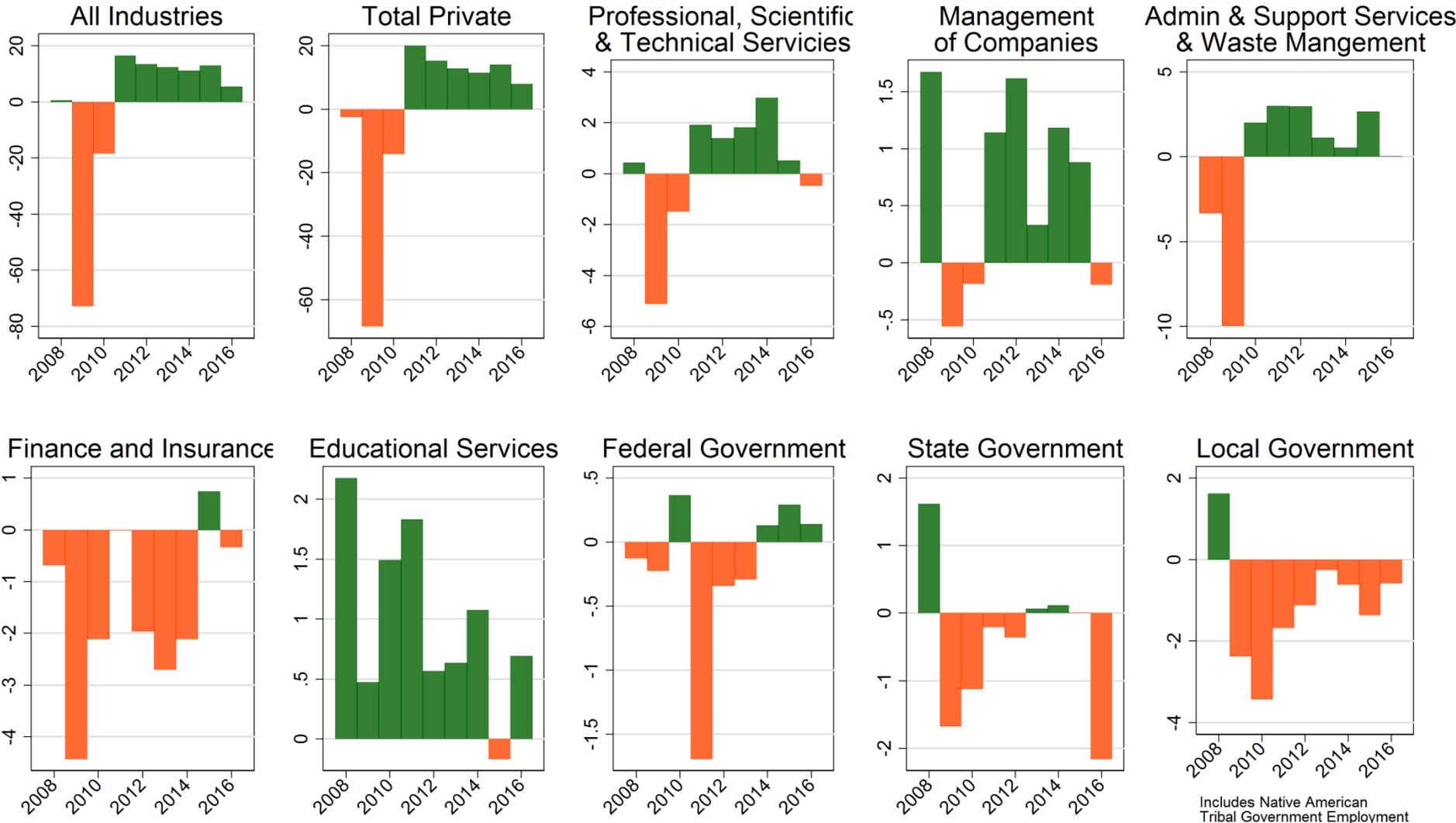


Source: CTDOL Current Employment Statistics (CES)

CONNECTICUT INDUSTRIES

Connecticut Employment

Annual Average -- Change from Prior Year -- (000's)

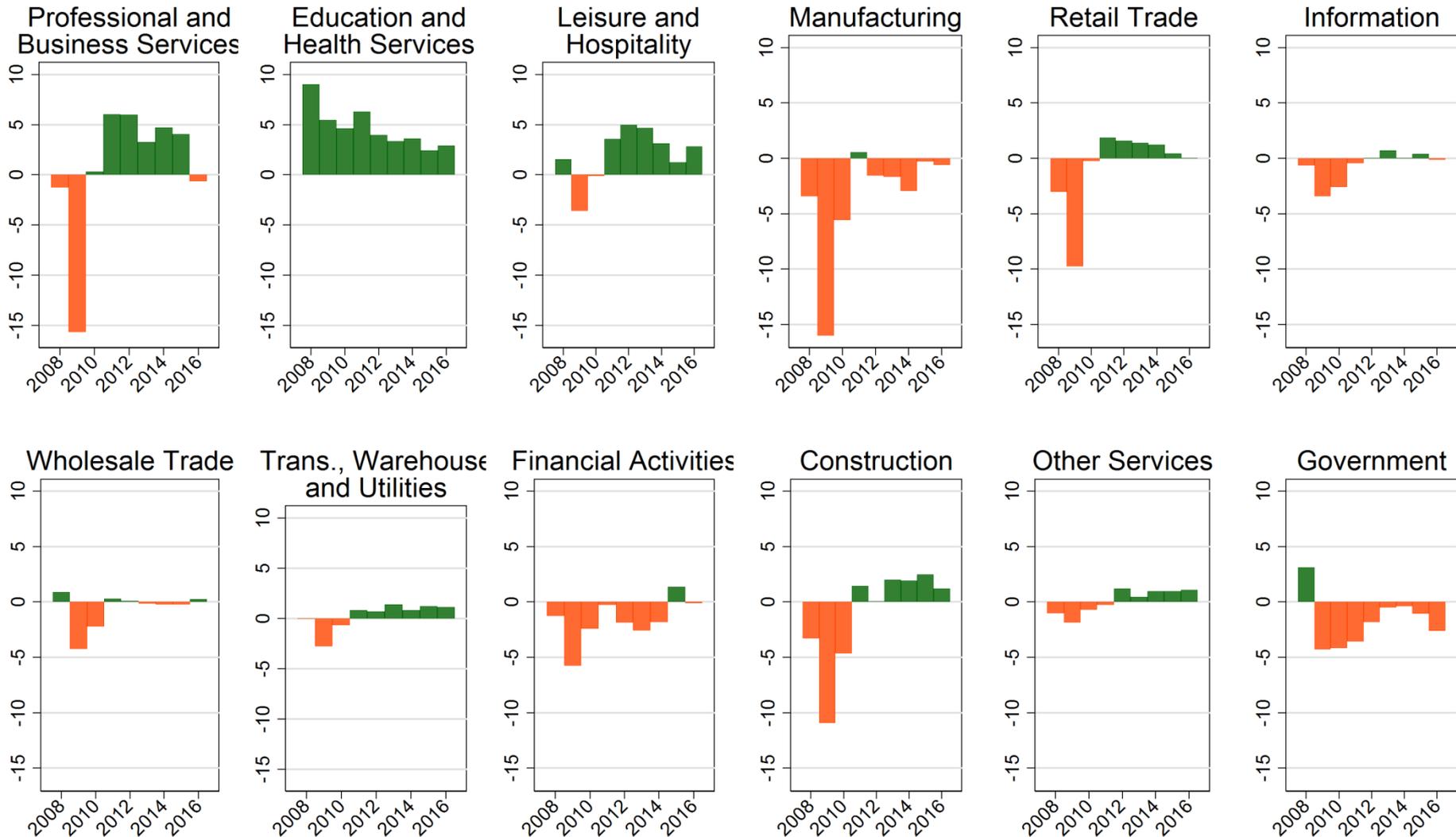


Includes Native American Tribal Government Employment

Source: Current Employment Statistics (CES)

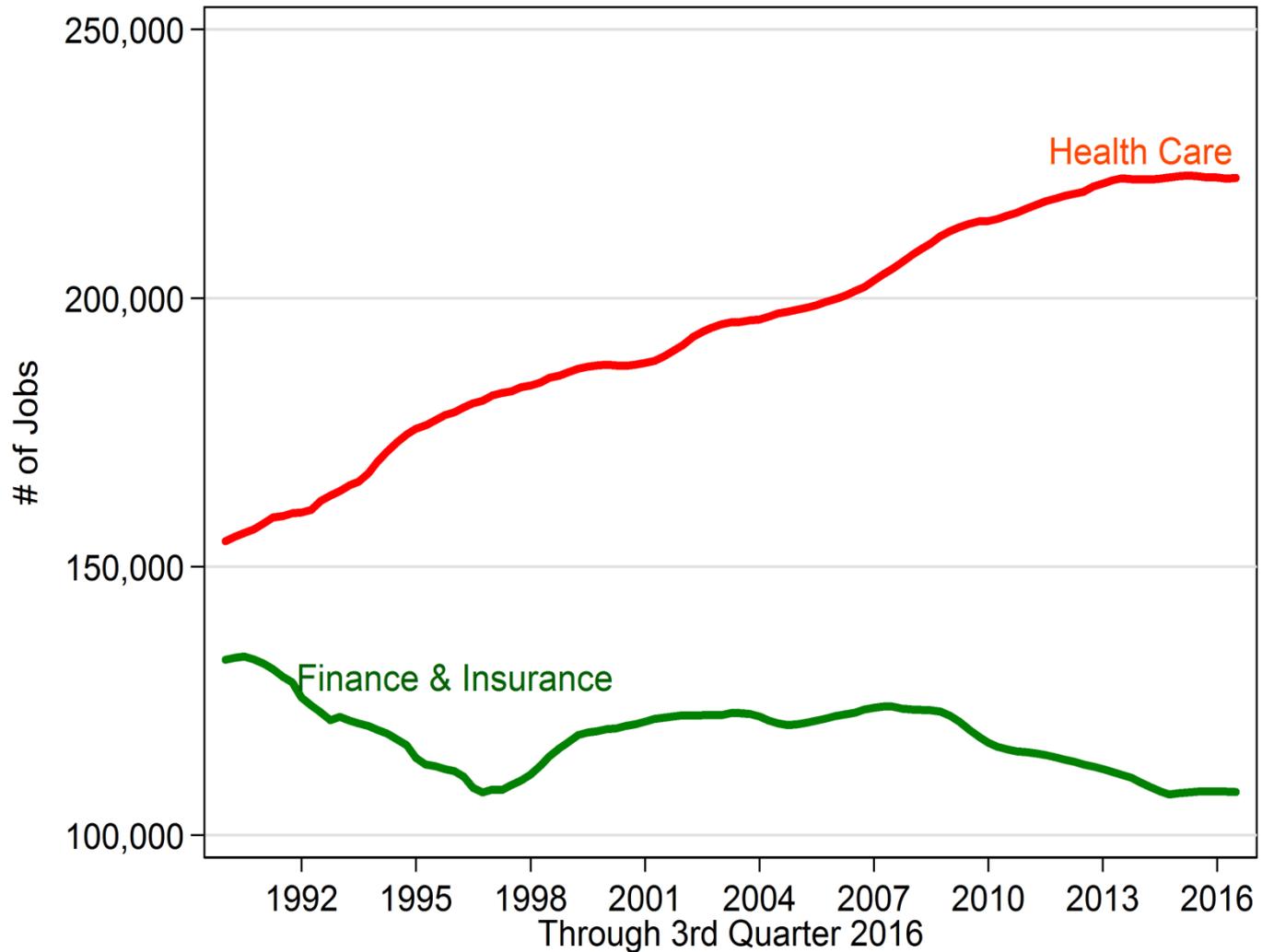
Connecticut Employment

Annual Average -- Change from Prior Year -- (000's)

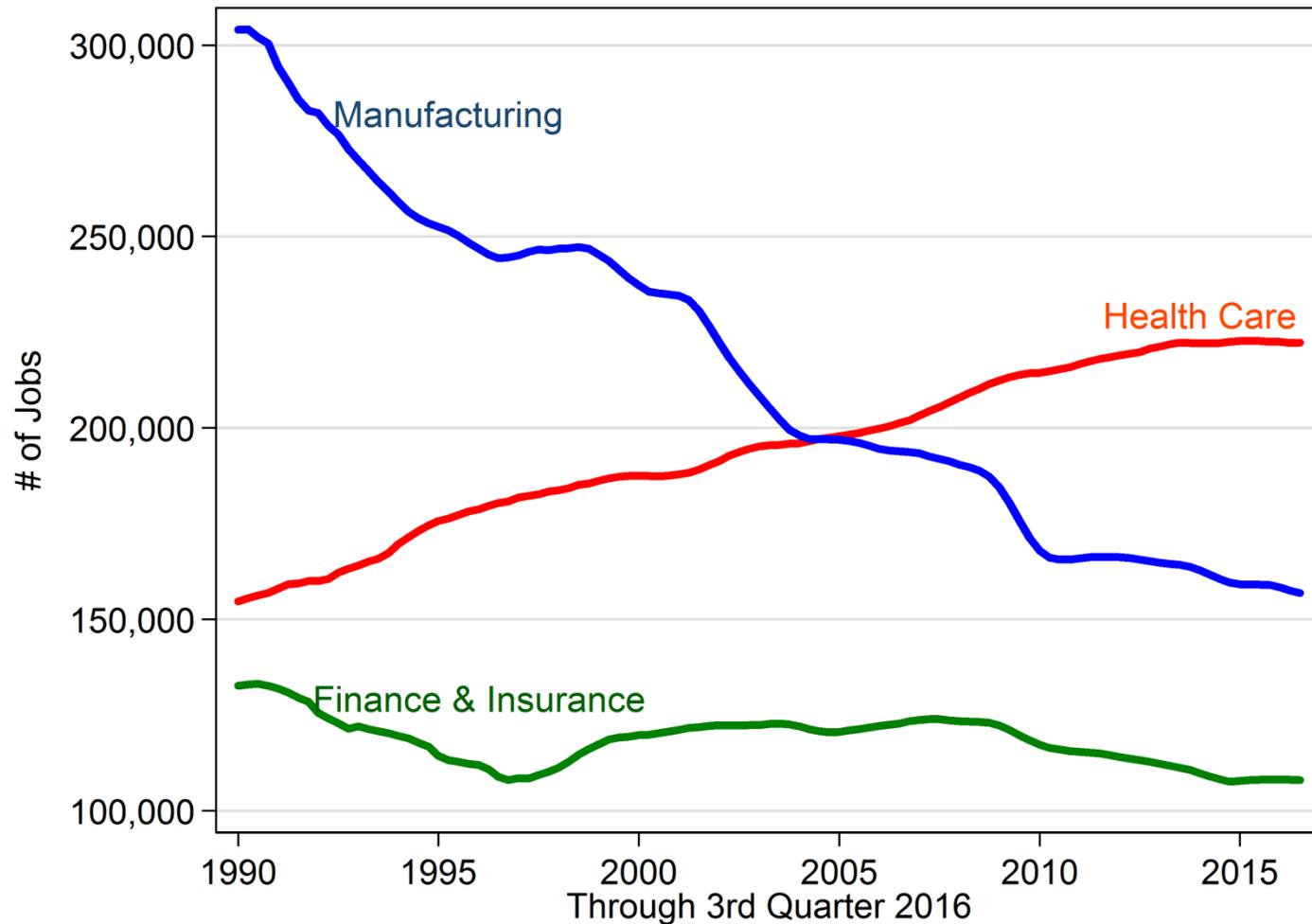


Source: Current Employment Statistics (CES)

Finance and Health Employment

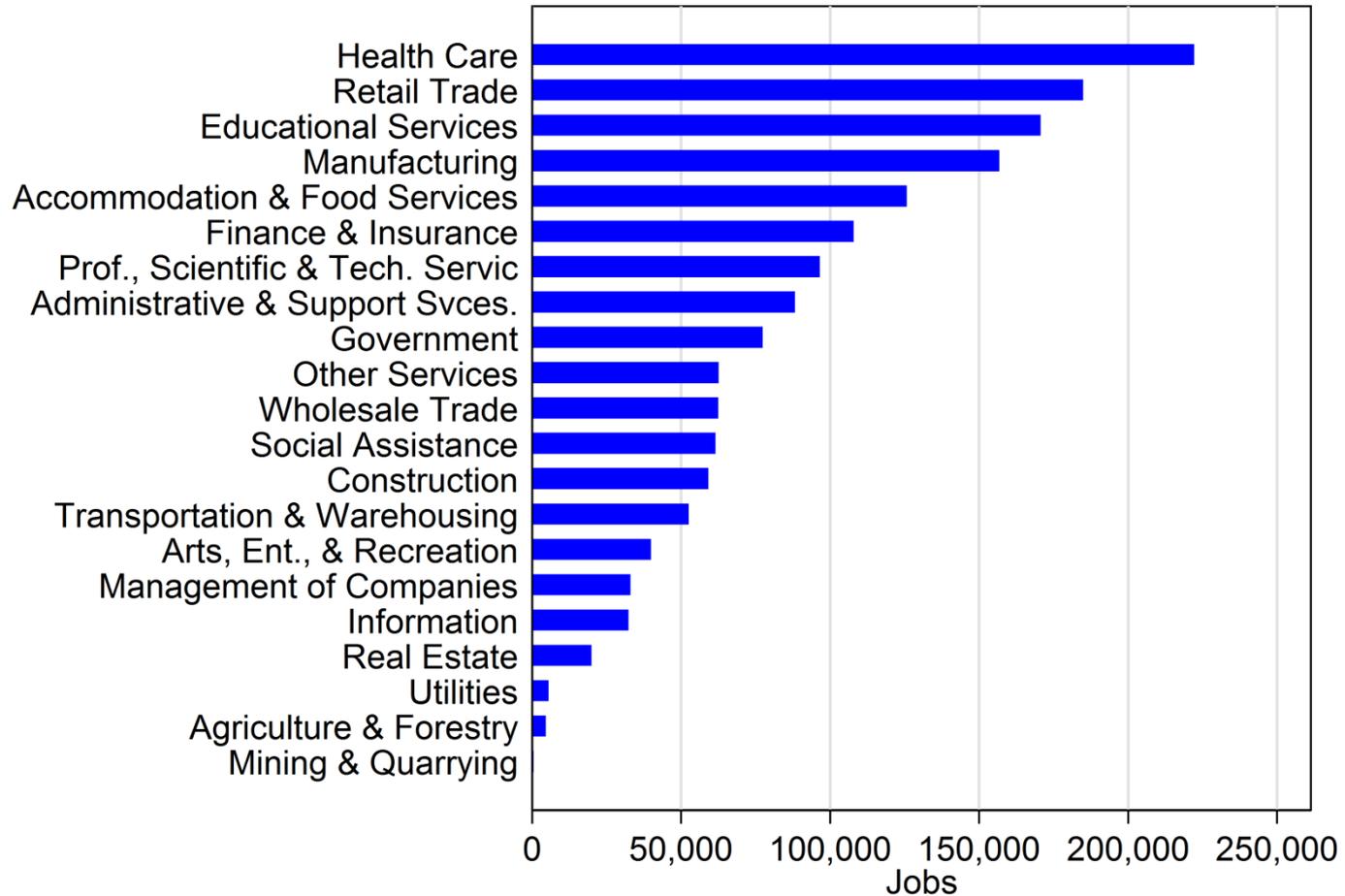


Finance, Health, & Manufacturing Employment



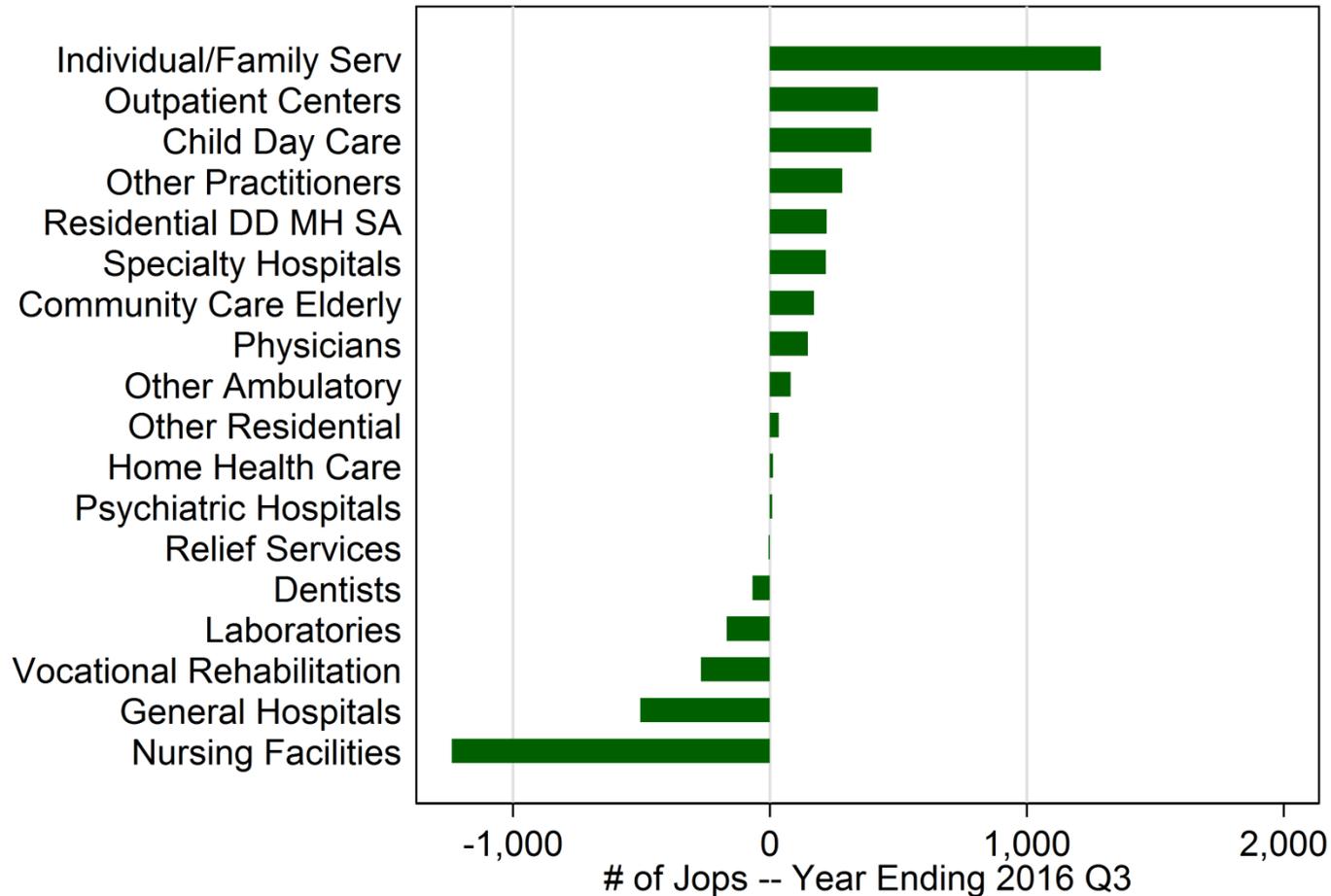
Connecticut Employment

Year Ending 2016 Q3

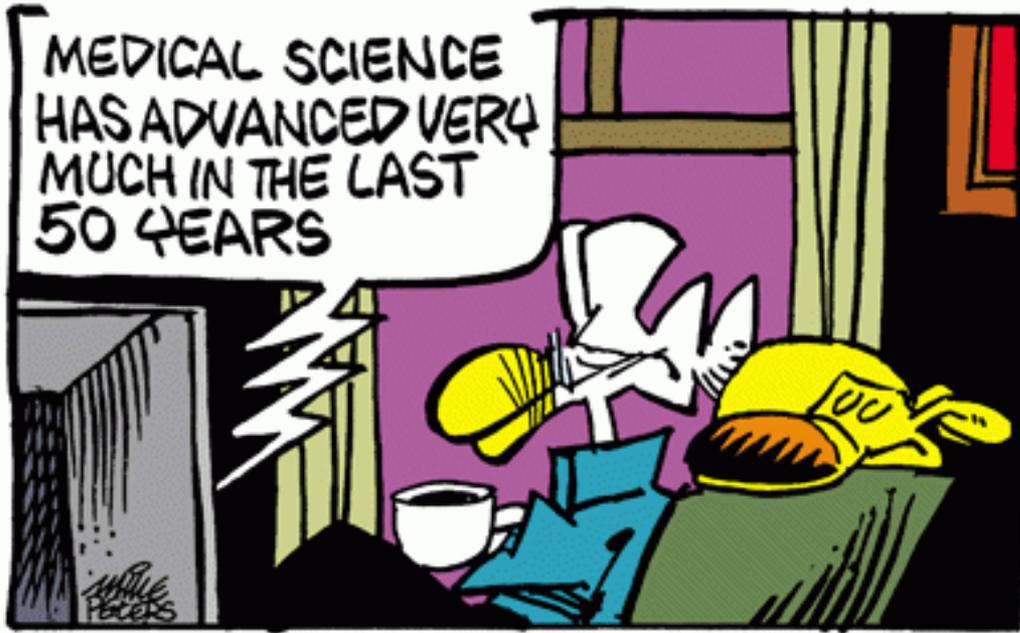


Employment Change This Year

Health Care and Social Assistance

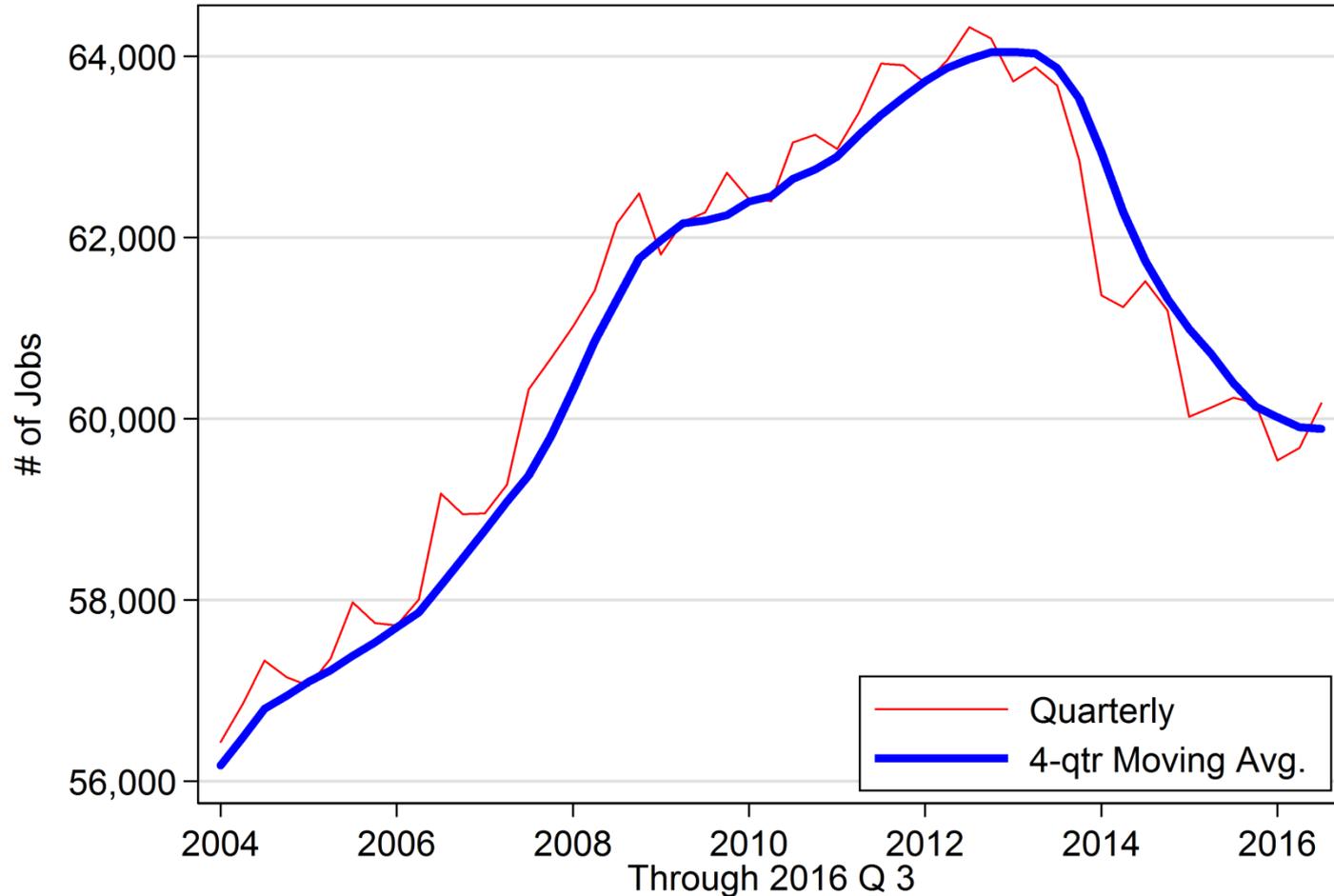


Source: Quarterly Census of Employment and Wages (QCEW)



Connecticut Employment

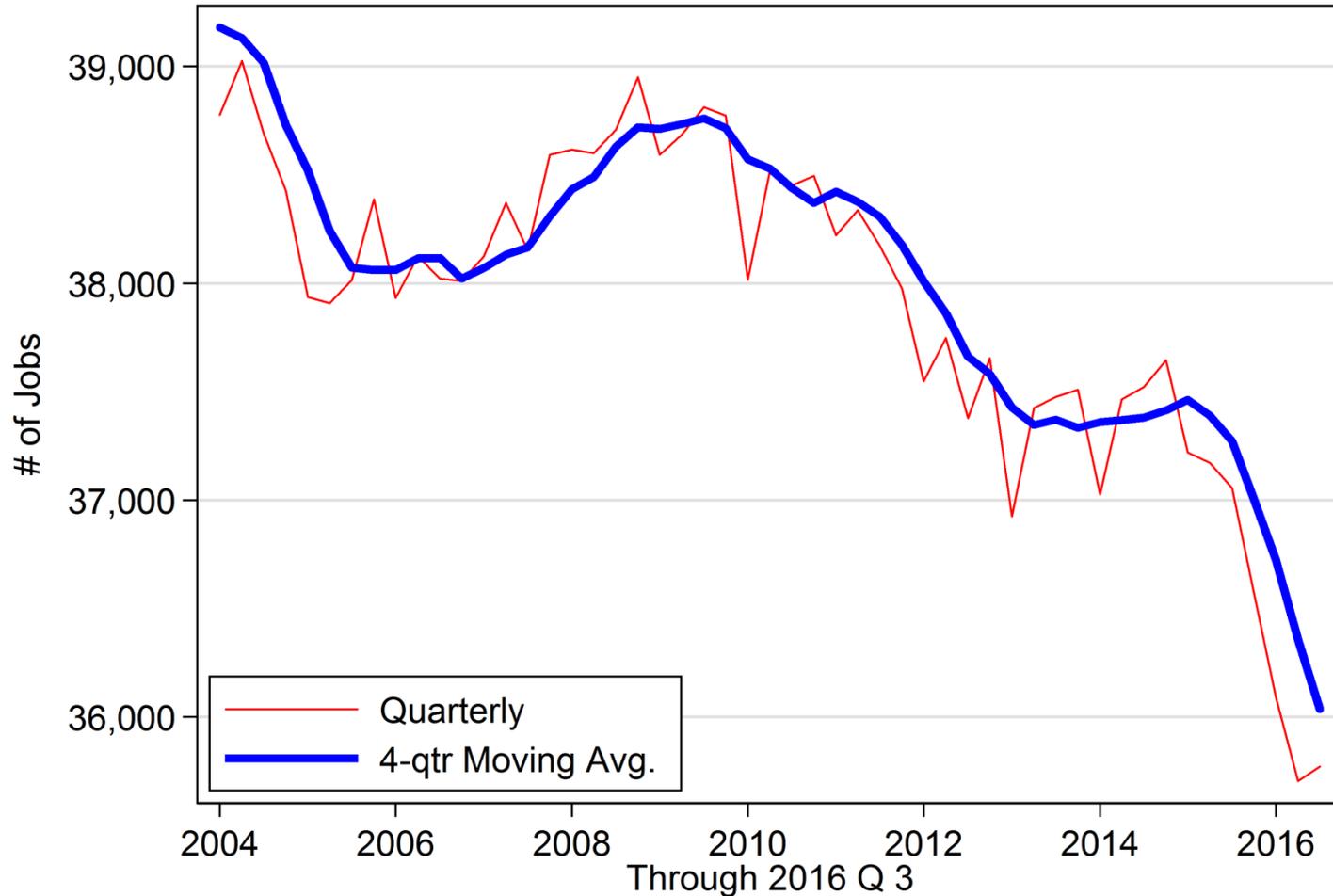
General Medical and Surgical Hospitals



Source: Quarterly Census of Employment and Wages (QCEW)

Connecticut Employment

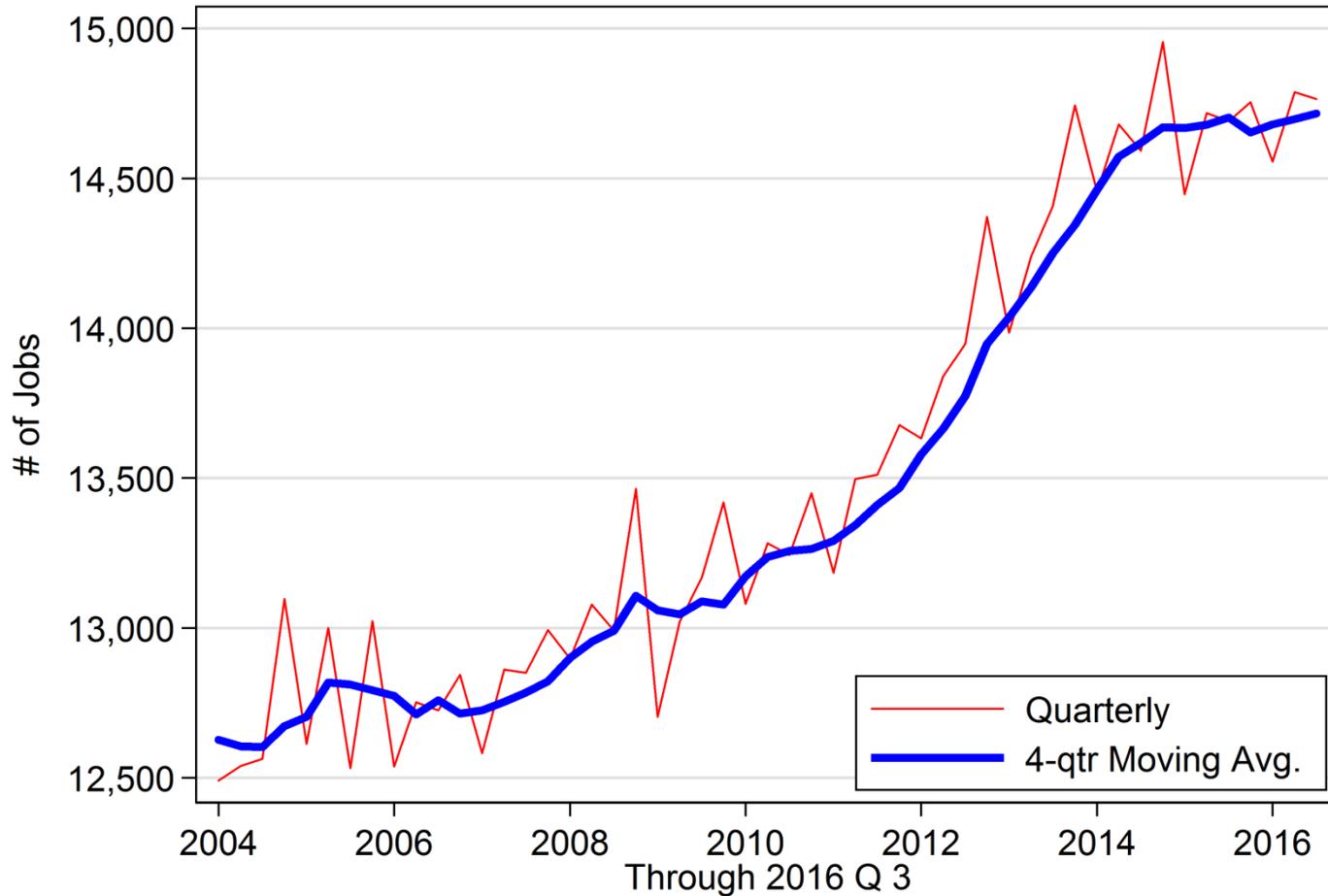
Nursing Care Facilities



Source: Quarterly Census of Employment and Wages (QCEW)

Connecticut Employment

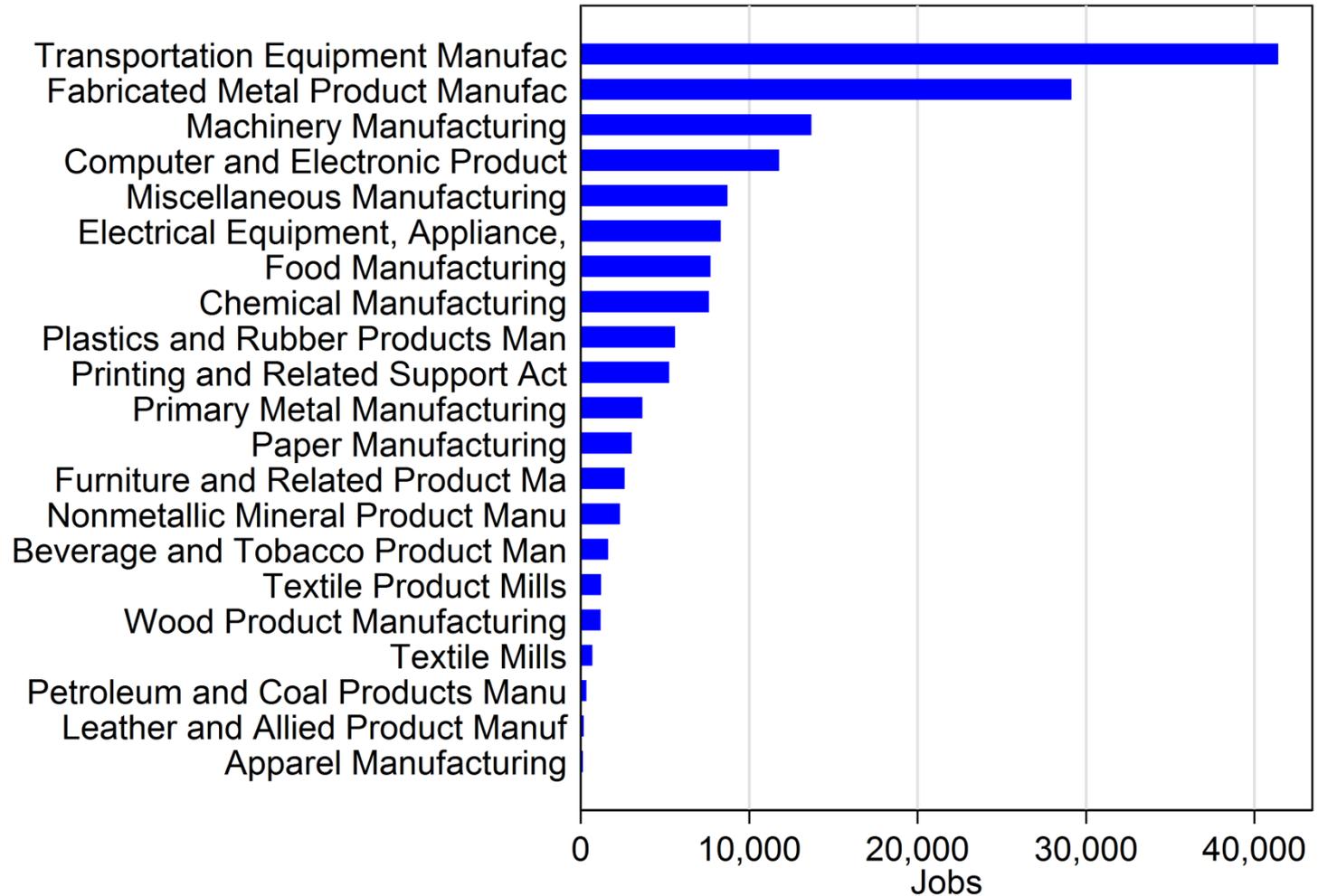
Home Health Care Services



Source: Quarterly Census of Employment and Wages (QCEW)

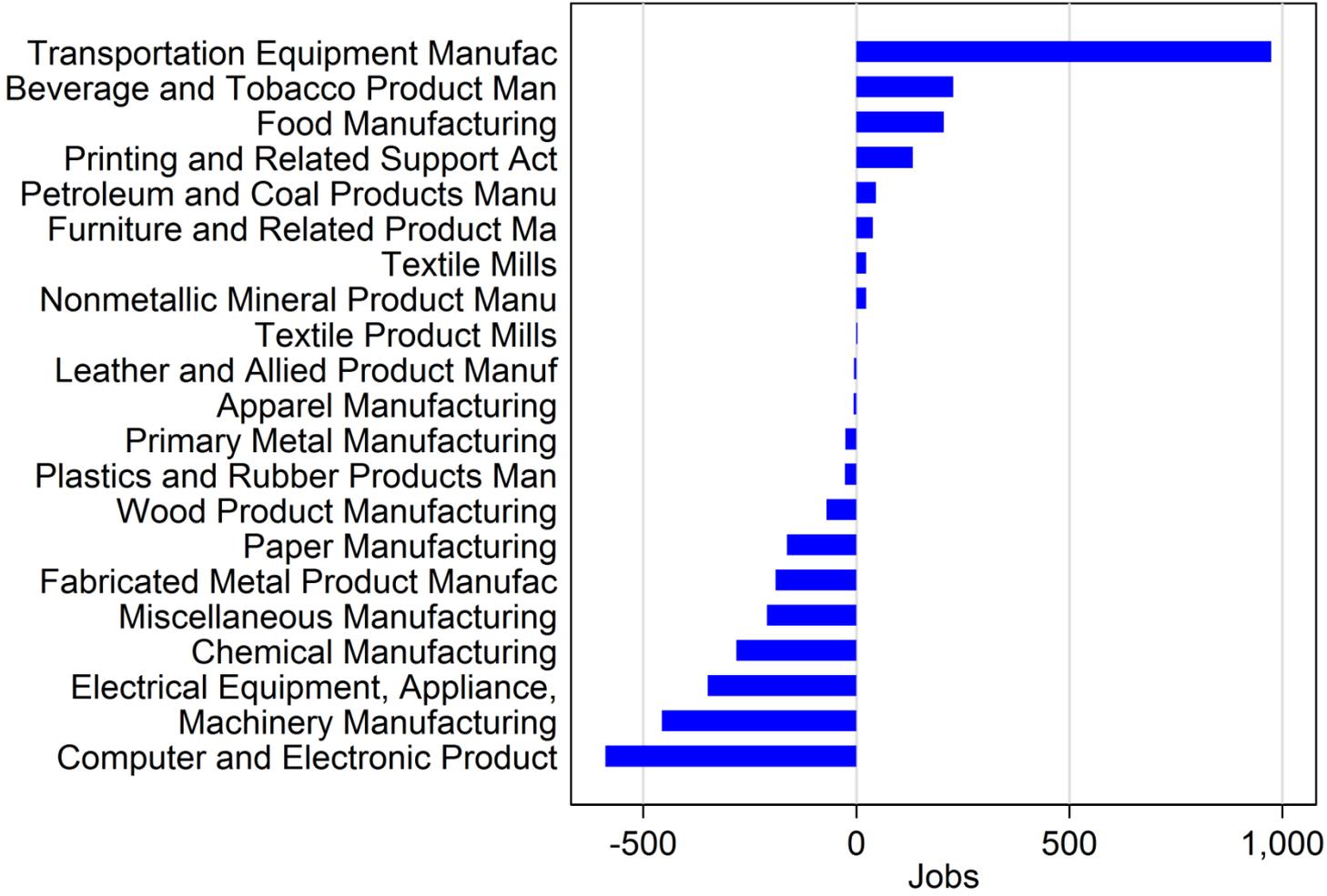
Connecticut Employment

Manufacturing – Year Ending 2016Q3



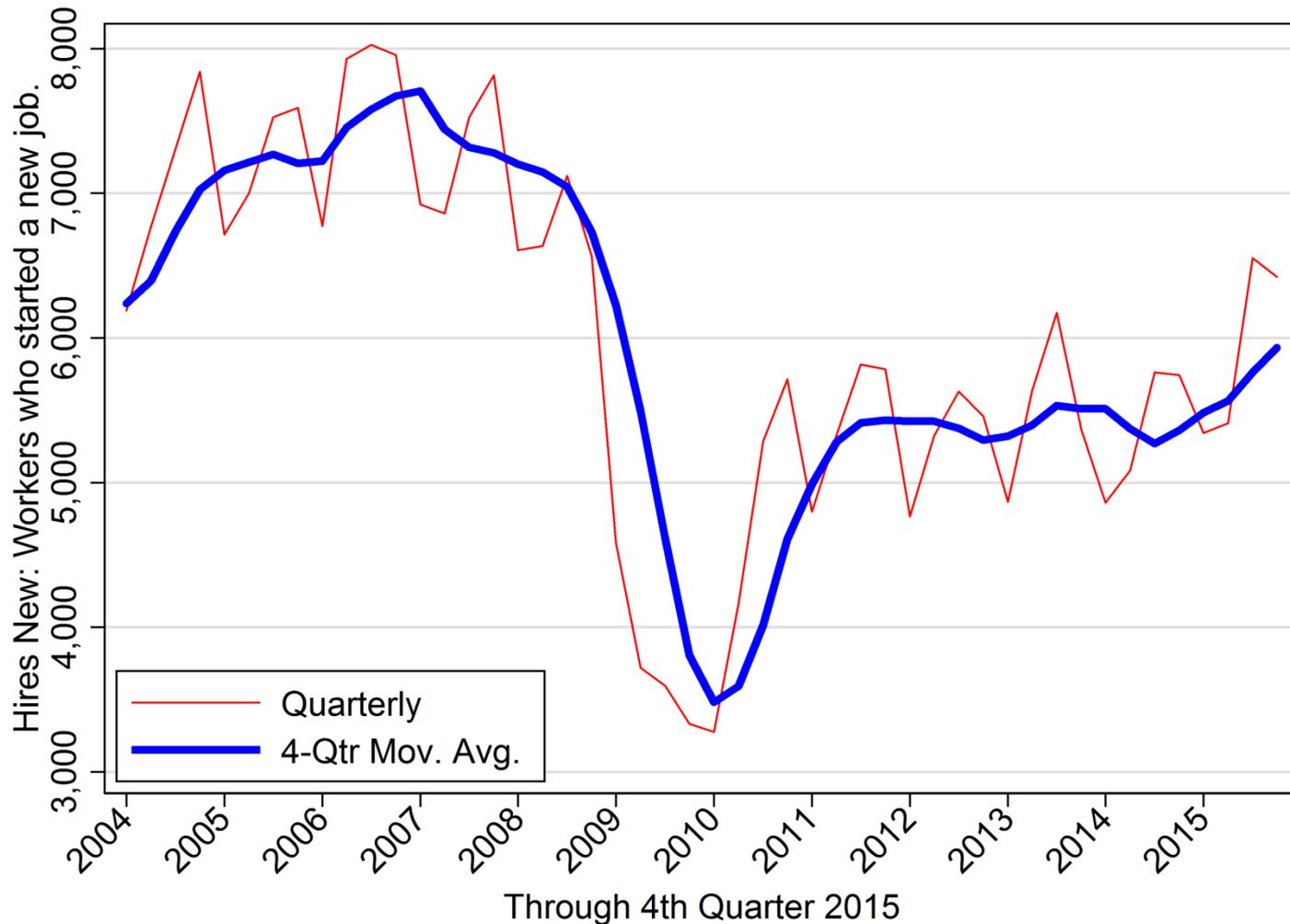
Connecticut Employment Change

Manufacturing – Year Ending 2016Q3



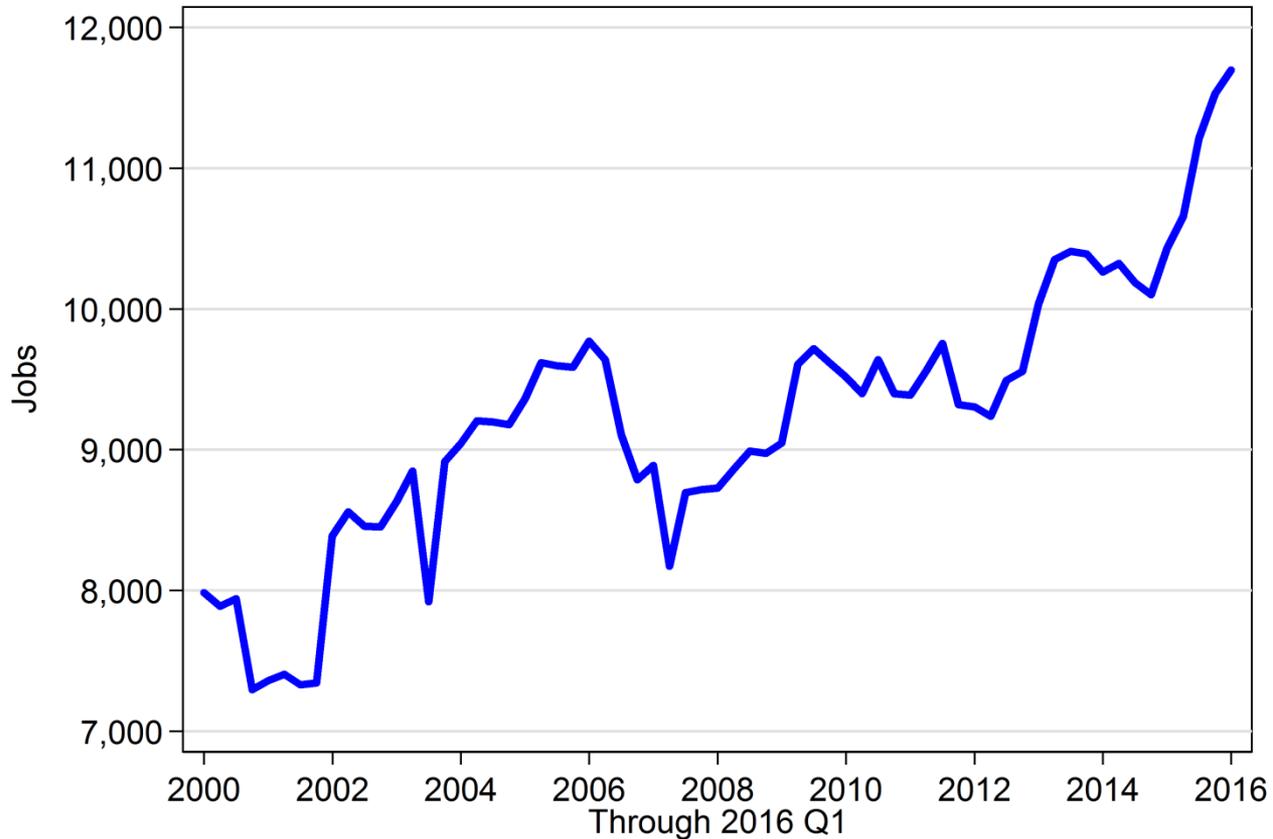
Connecticut Manufacturing New Hires

Stable Hires Per Quarter



Connecticut Employment

Ship and Boat Building



Source: Quarterly Workforce Indicators (QWI)

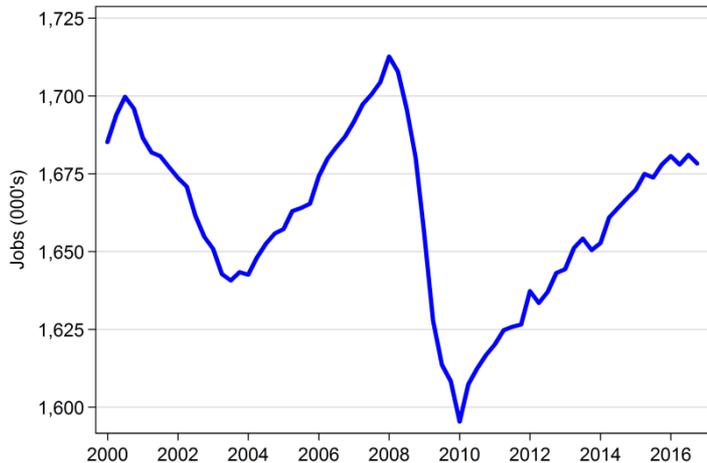
Data significantly distorted, fuzzed value released

EMPLOYMENT BY AREA AND TOWN

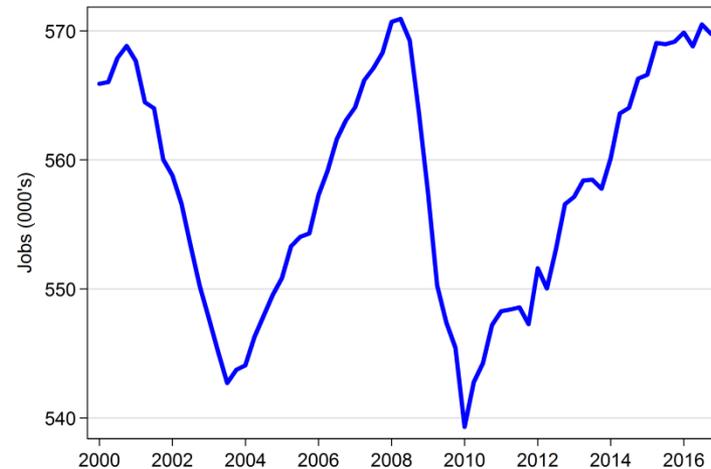
Payroll Employment

Statewide and Largest Labor Market Areas

Connecticut



Hartford



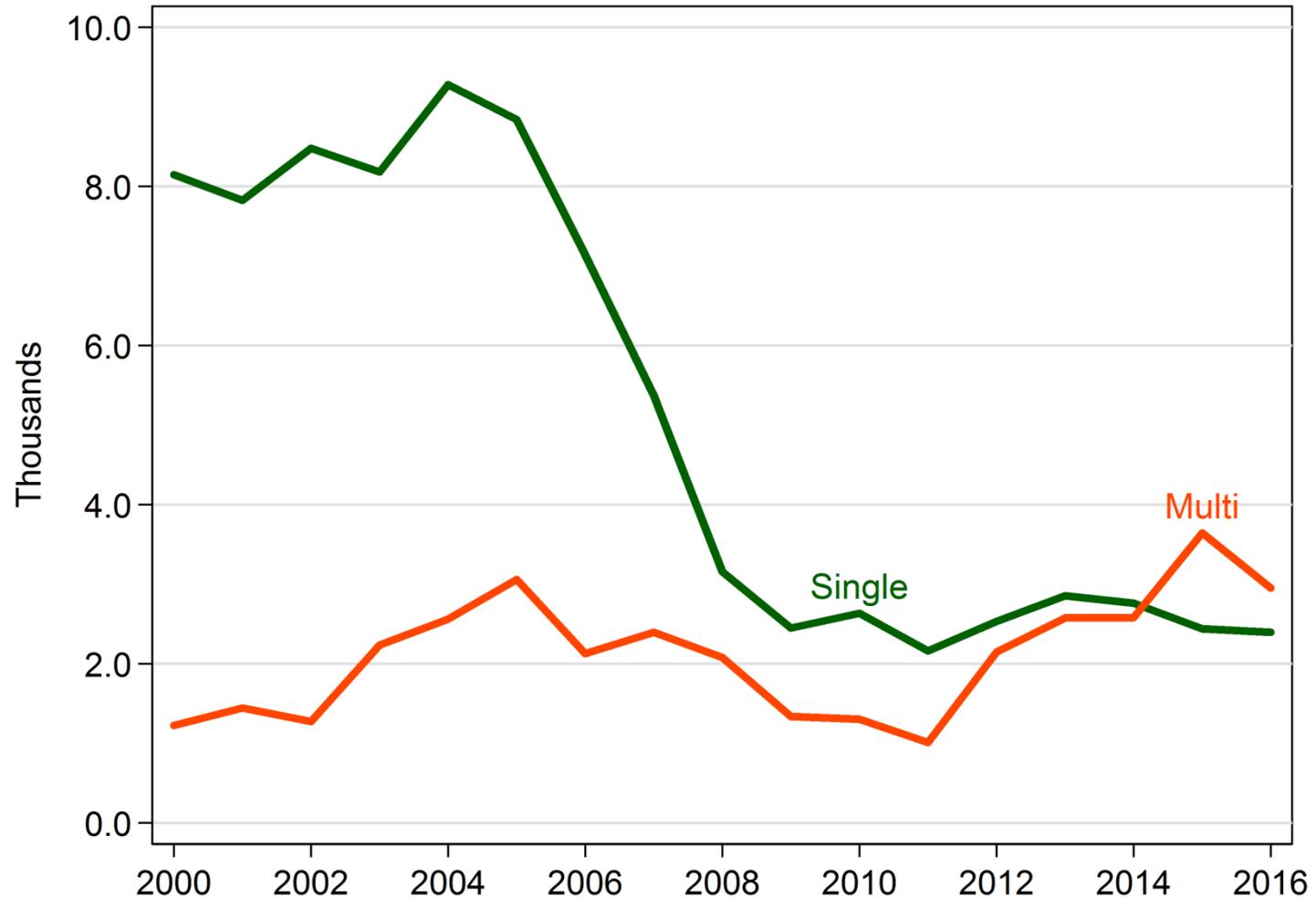
Bridgeport-Stamford



New Haven

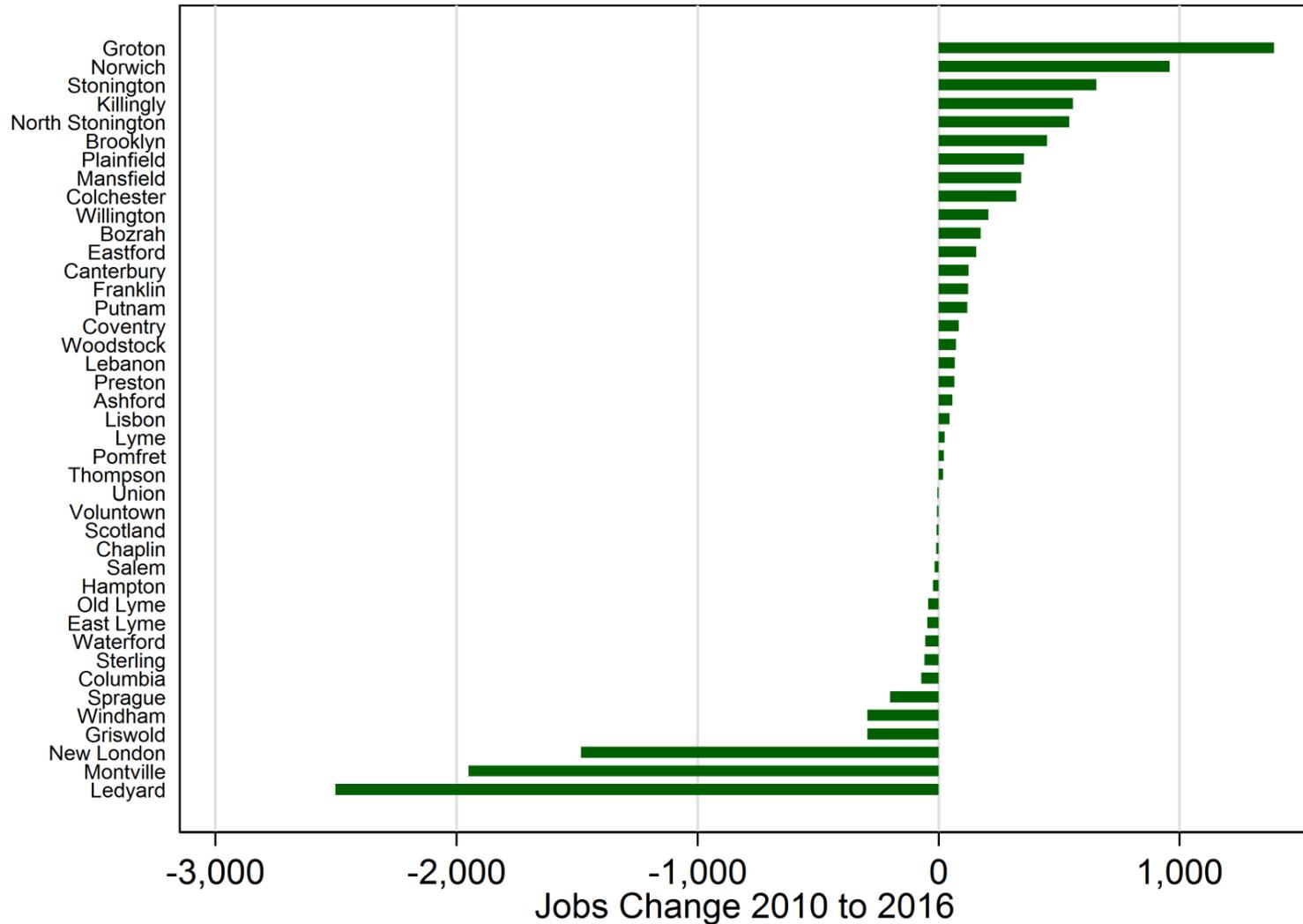


Connecticut Annual Housing Permits



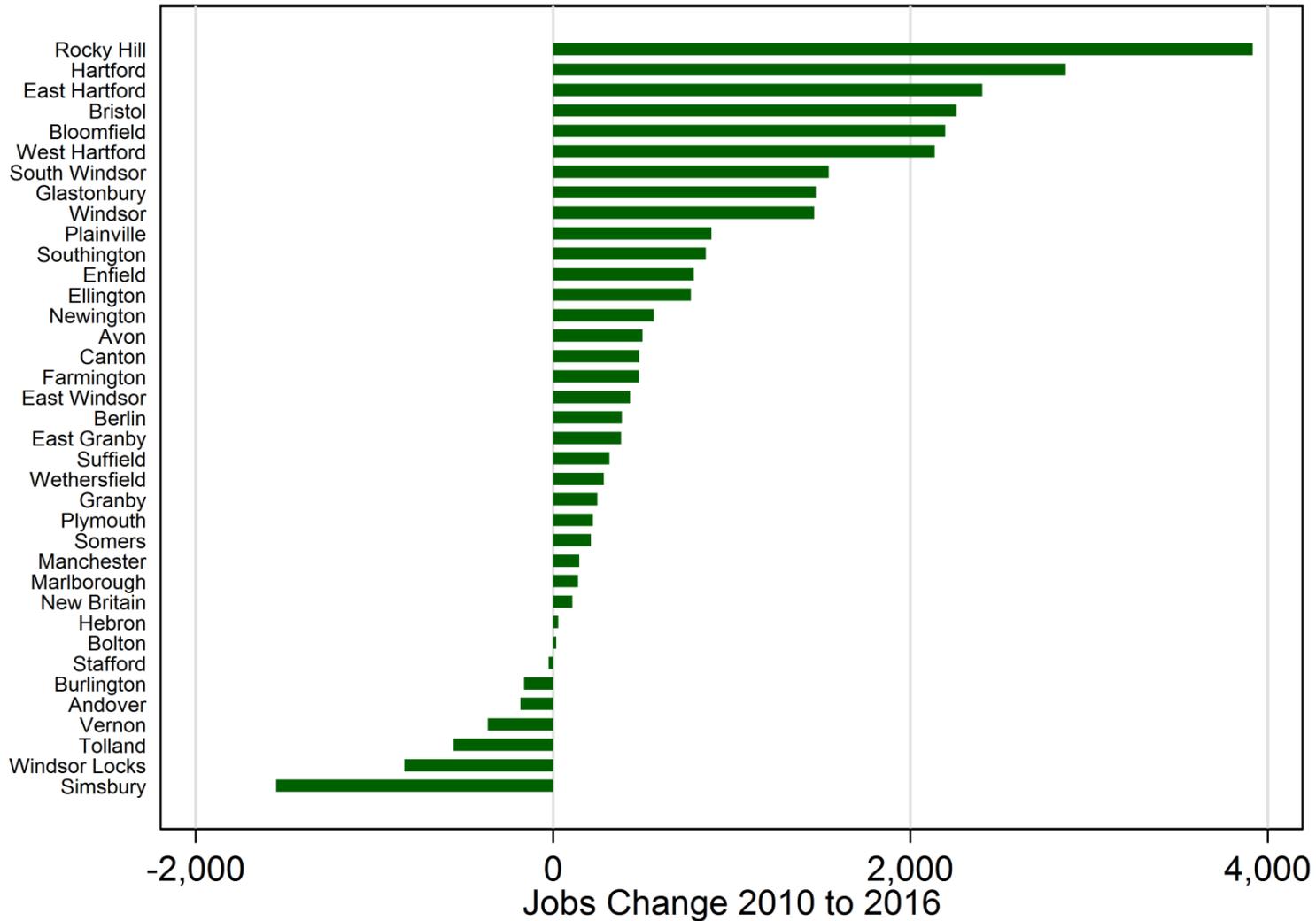
Employment Change by Town

Eastern Connecticut



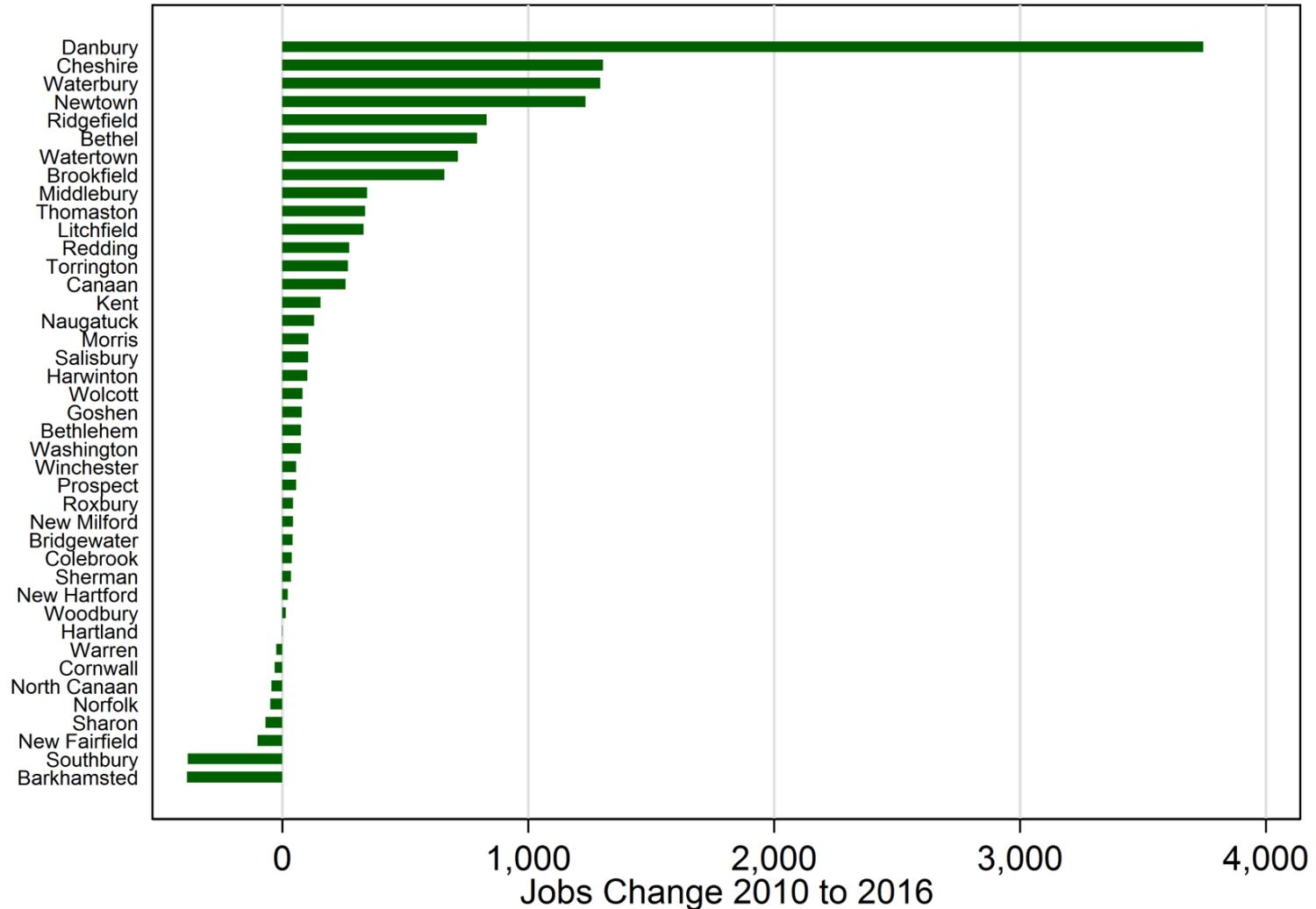
Employment Change by Town

North Central Connecticut



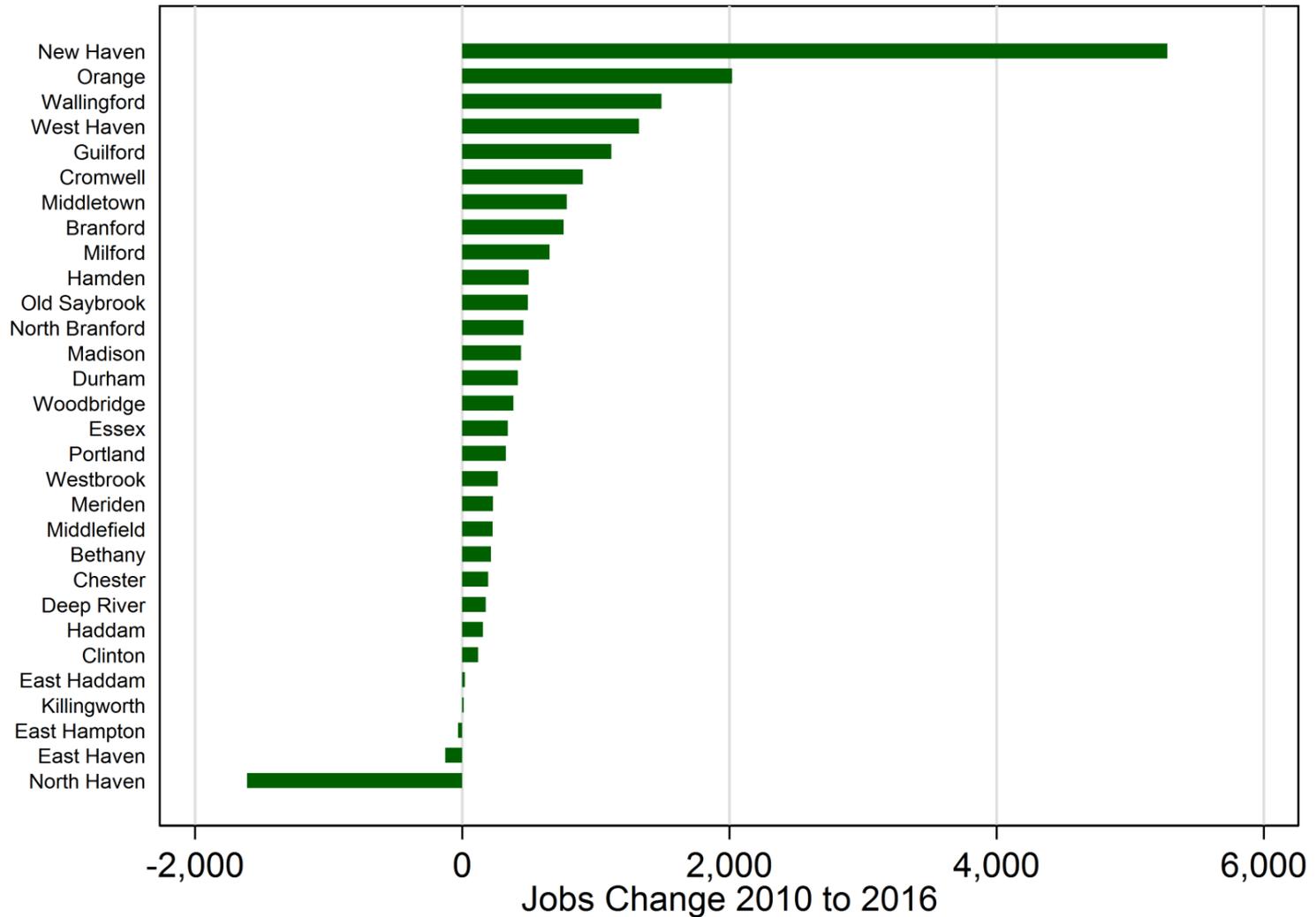
Employment Change by Town

Northwest Connecticut



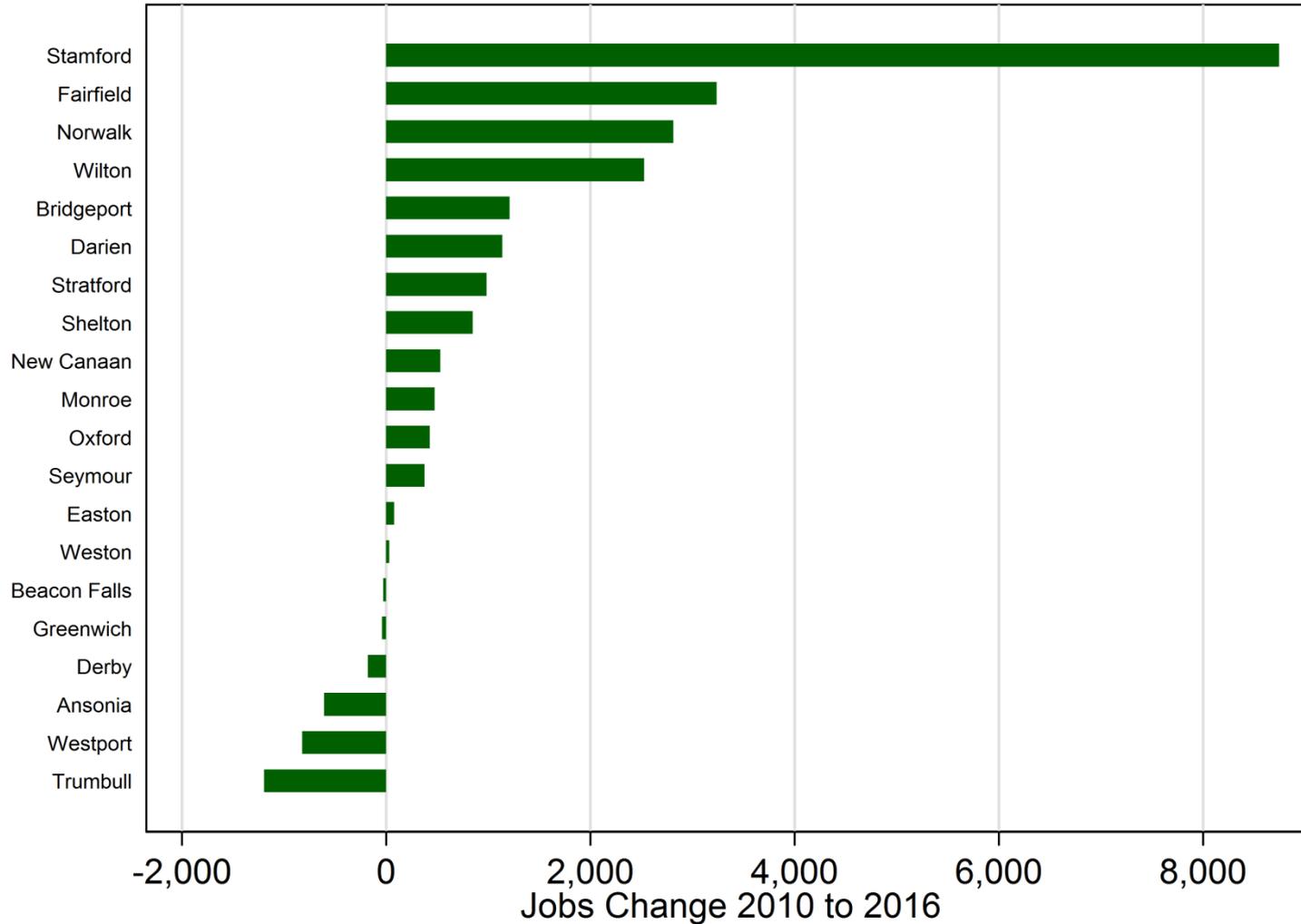
Employment Change by Town

South Central Connecticut



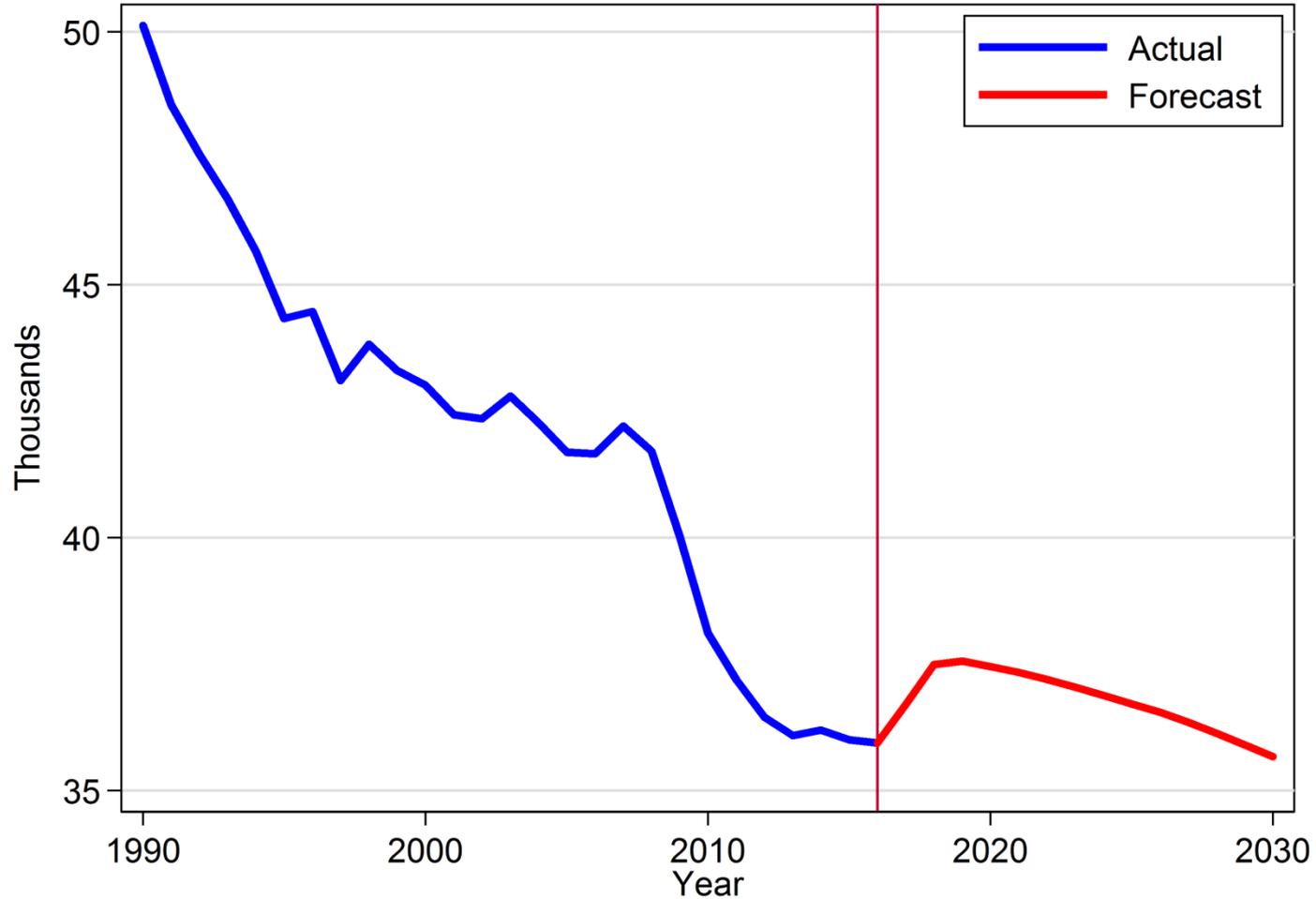
Employment Change by Town

Southwest Connecticut



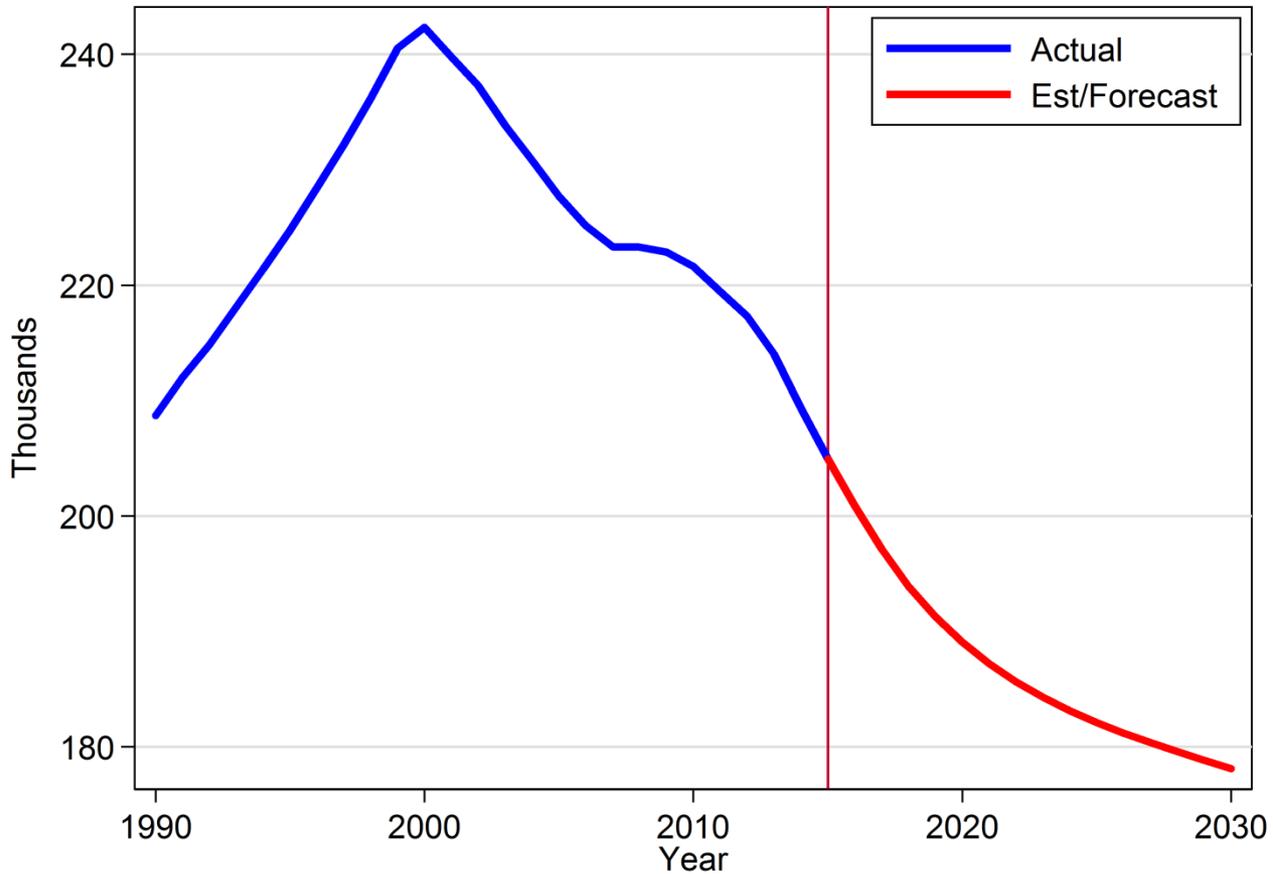
POPULATION, DEMOGRAPHICS & PROJECTIONS

Births in Connecticut



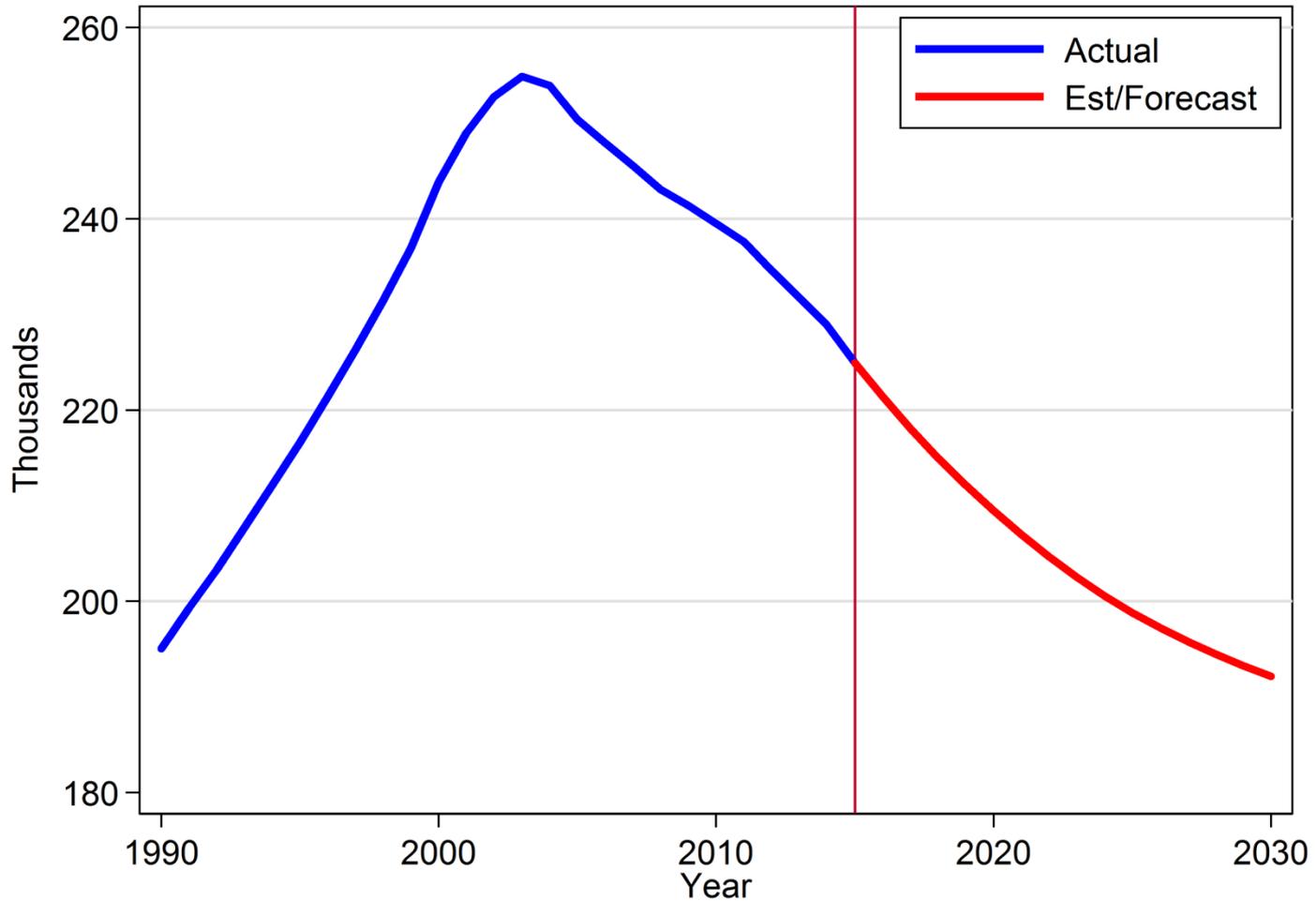
Connecticut Population

Age 5 to 9



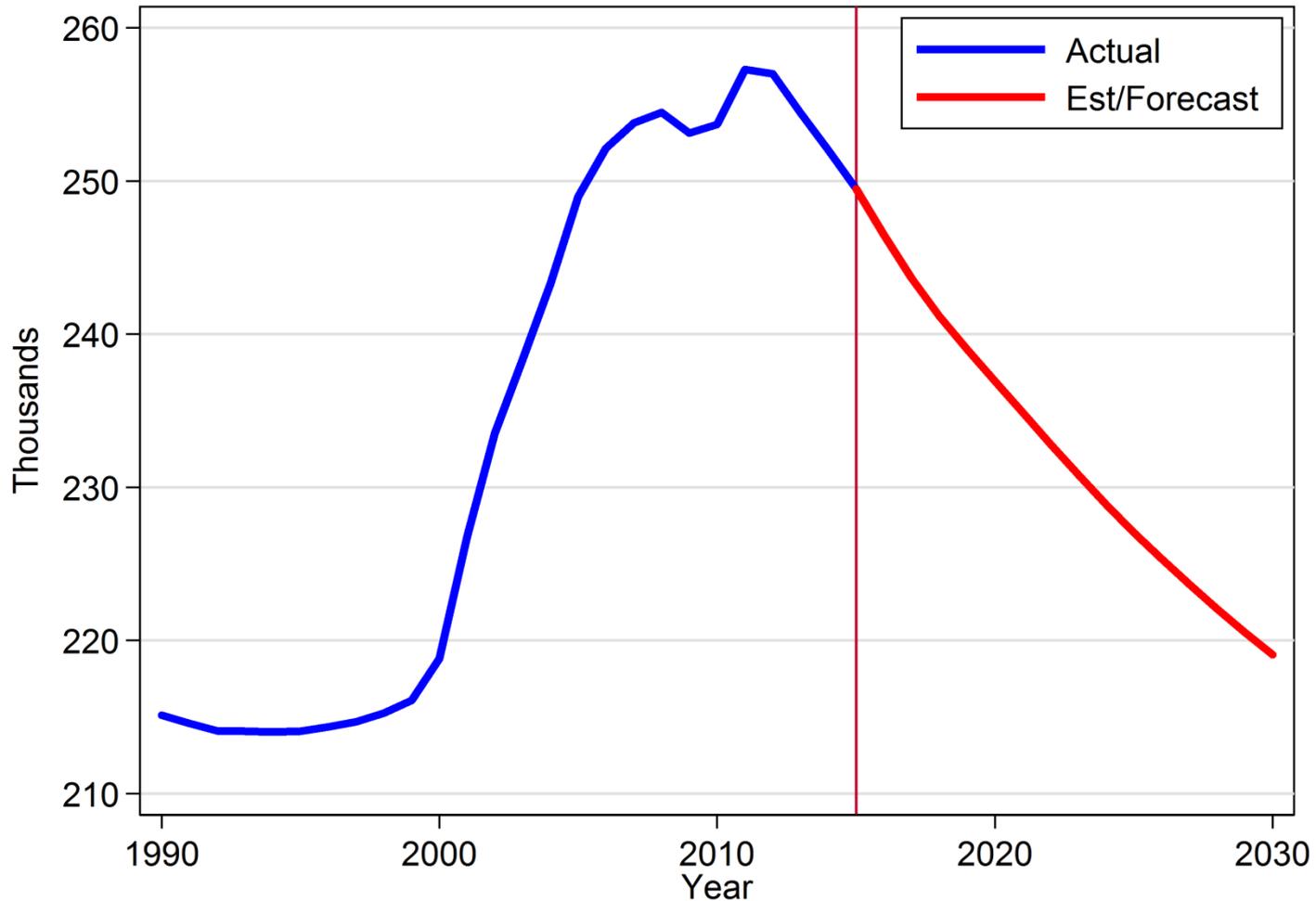
Connecticut Population

Age 10 to 14



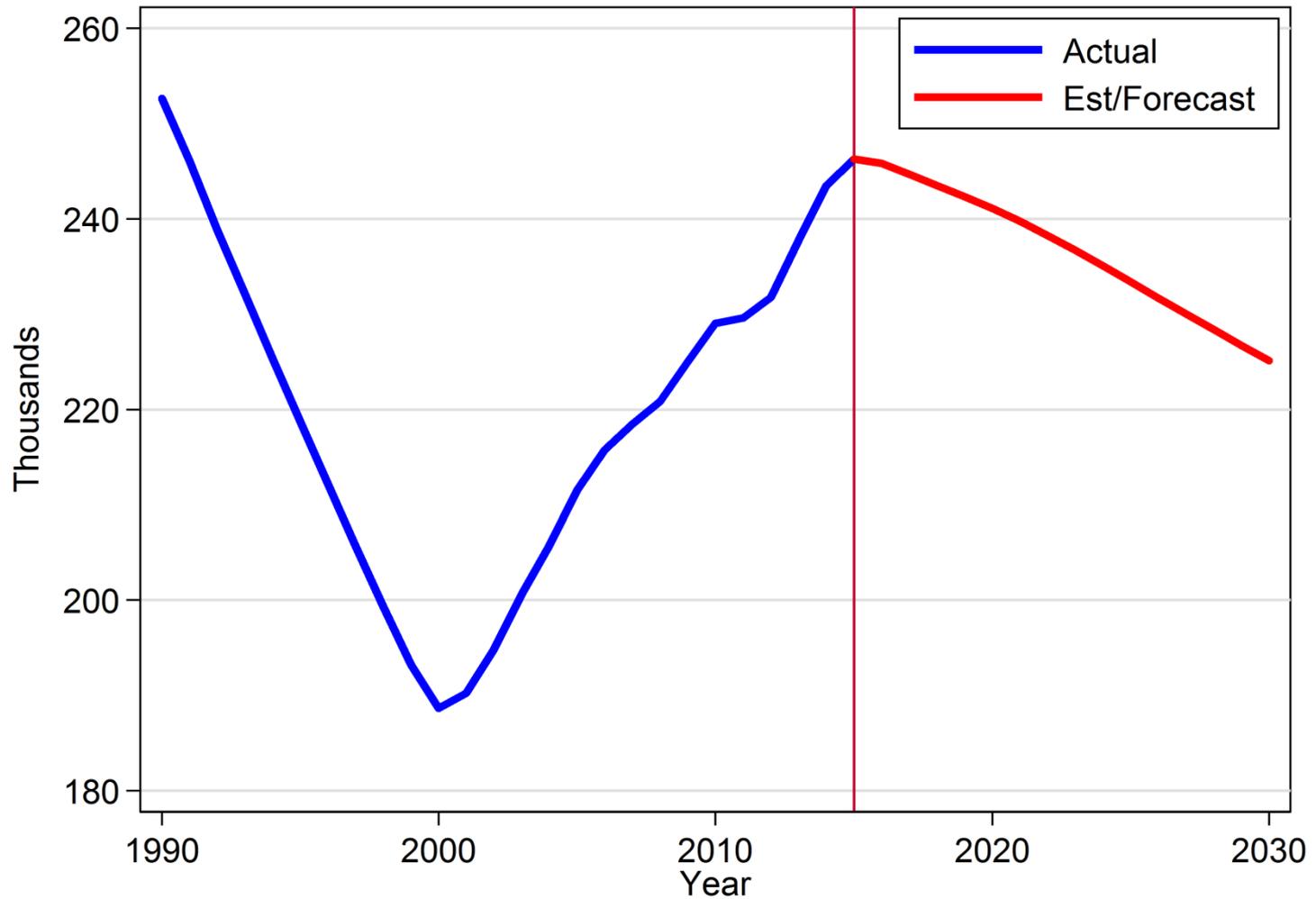
Connecticut Population

Age 15 to 19



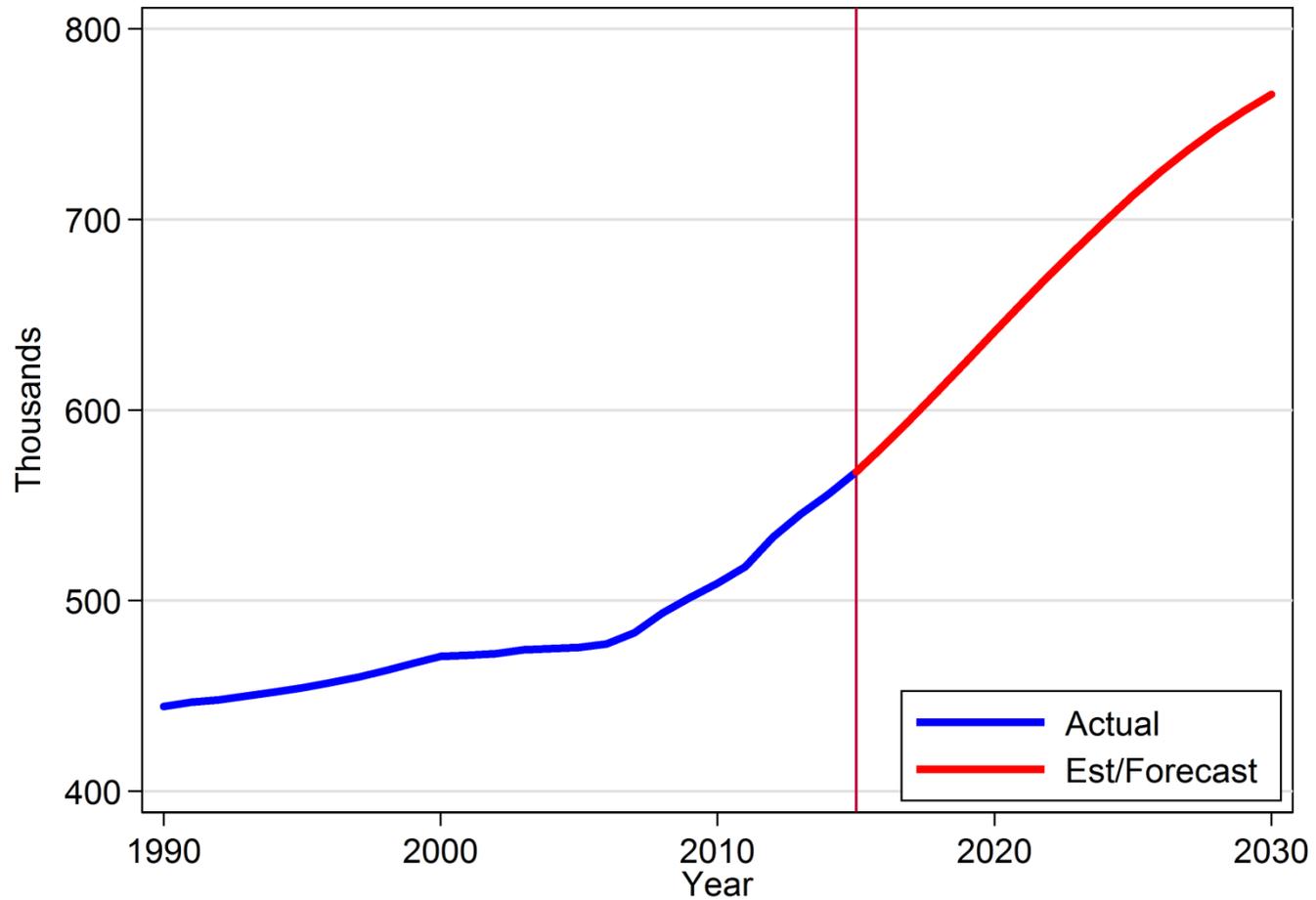
Connecticut Population

Age 20 to 24



Connecticut Population

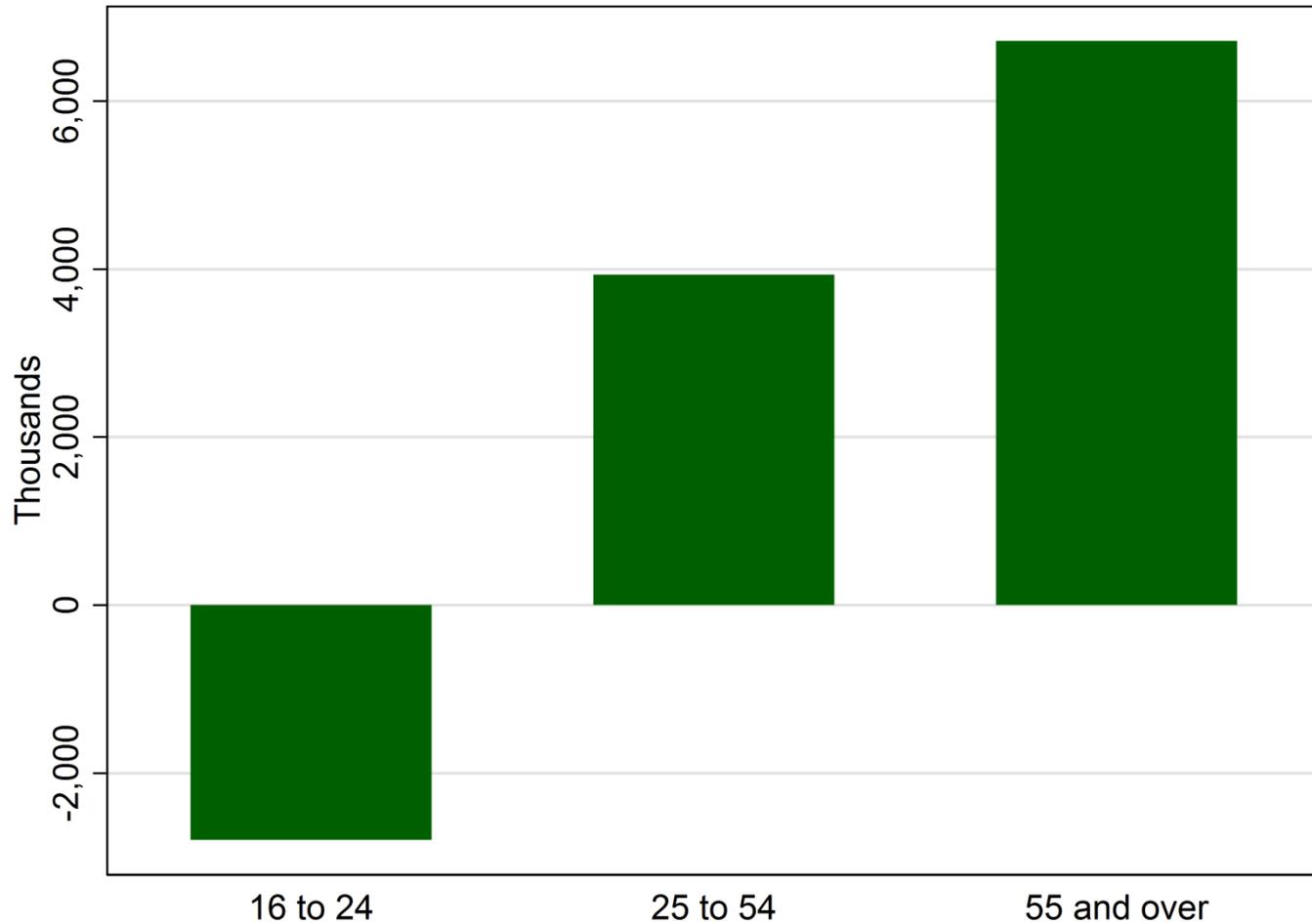
Age 65 and Over



“I think hip hop is doing a lot to make poetry accessible and popular with a much wider audience.”

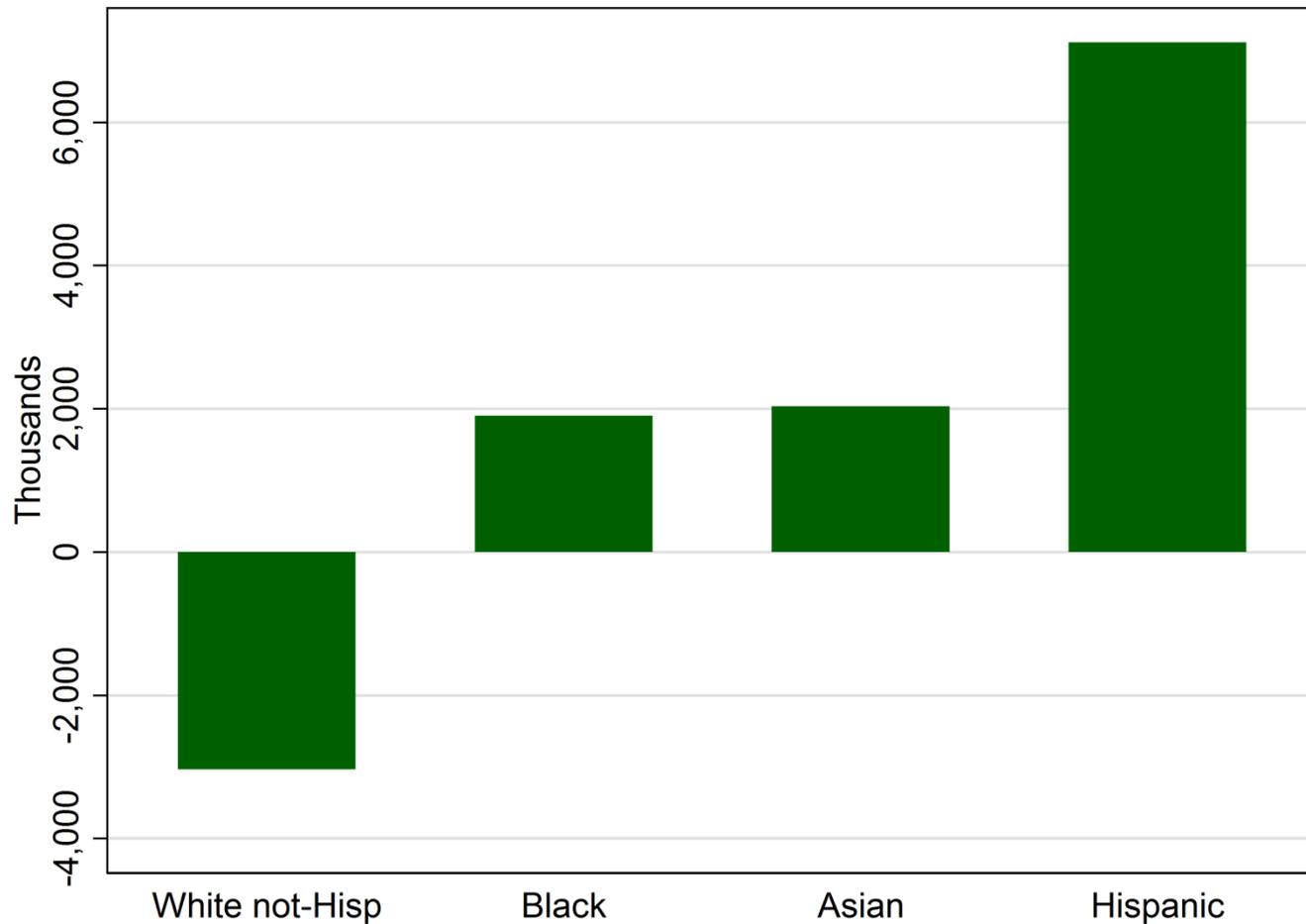
— Henry Morgenthau III, Age 100

Change in U.S. Labor Force 2014 to 2024 by Age



Change in U.S. Labor Force

2014 to 2024 by Race or Ethnic Group



HELLO my name is...

Top 15 Most Popular Last Names in the U.S. by Rank

1990

Smith
Johnson
Williams
Jones
Brown
Davis
Miller
Wilson
Moore
Taylor
Anderson
Thomas
Jackson
White
Harris

2000

Smith
Johnson
Williams
Brown
Jones
Miller
Davis
Garcia
Rodriguez
Wilson
Martinez
Anderson
Taylor
Thomas
Hernandez

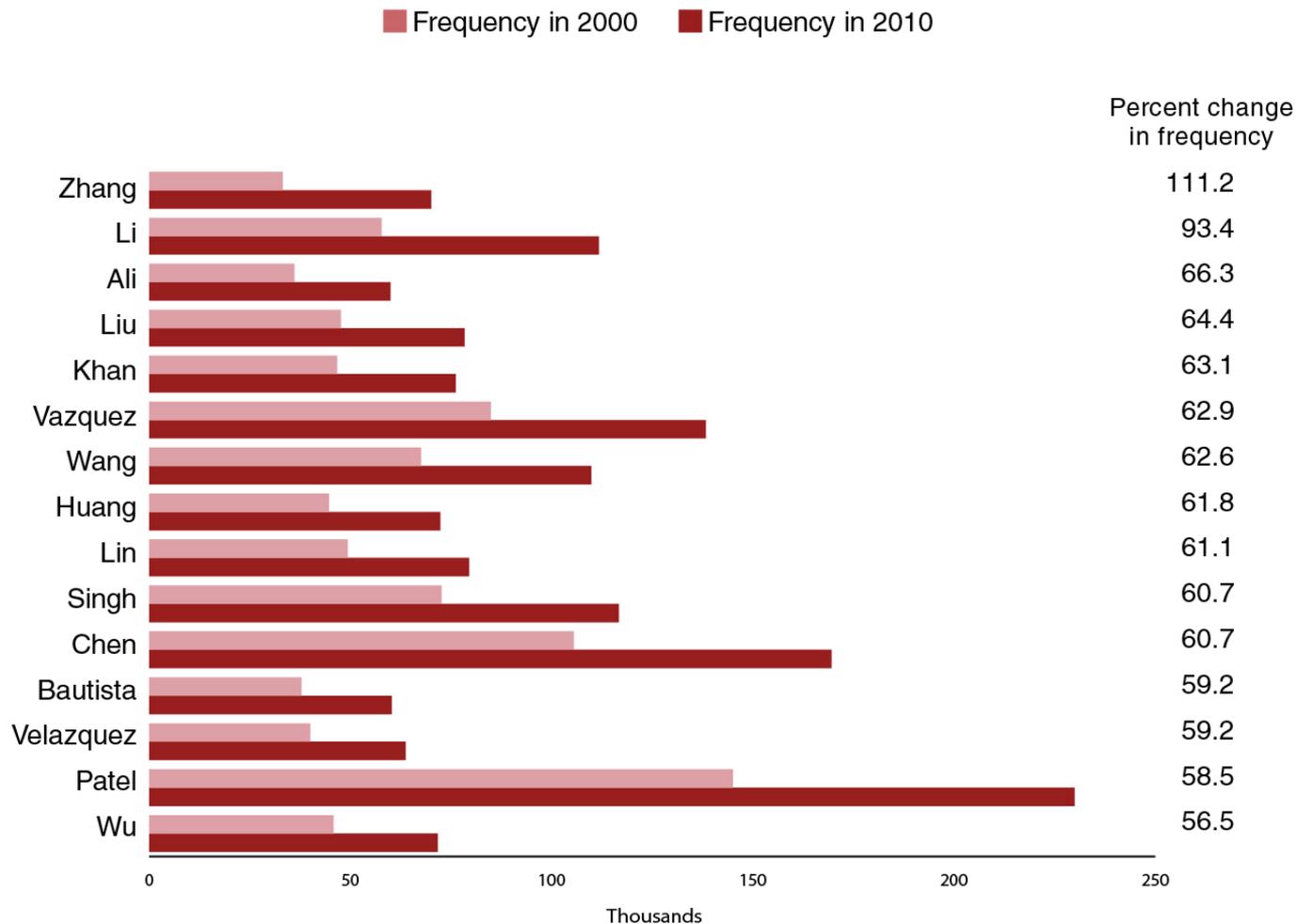
2010

Smith
Johnson
Williams
Brown
Jones
Garcia
Miller
Davis
Rodriguez
Martinez
Hernandez
Lopez
Gonzalez
Wilson
Anderson

Surnames in red indicate their first appearance among the top 15 last names in a census.

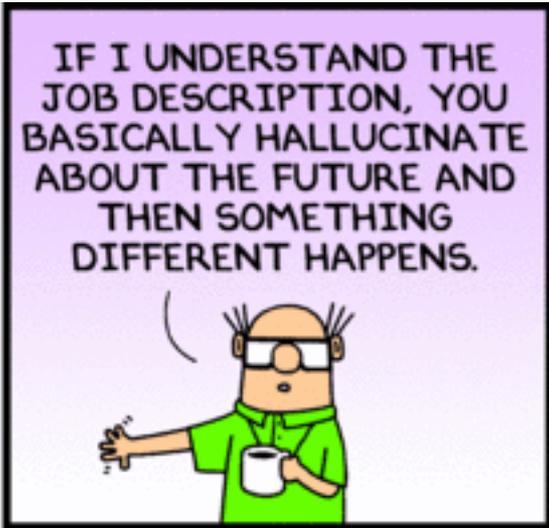
Top Surnames

Top 15 Last Names With the Largest Frequency Increase

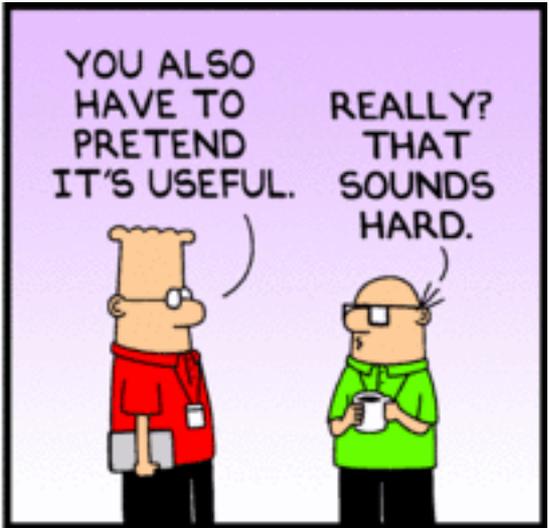




Dilbert.com DilbertCartoonist@gmail.com

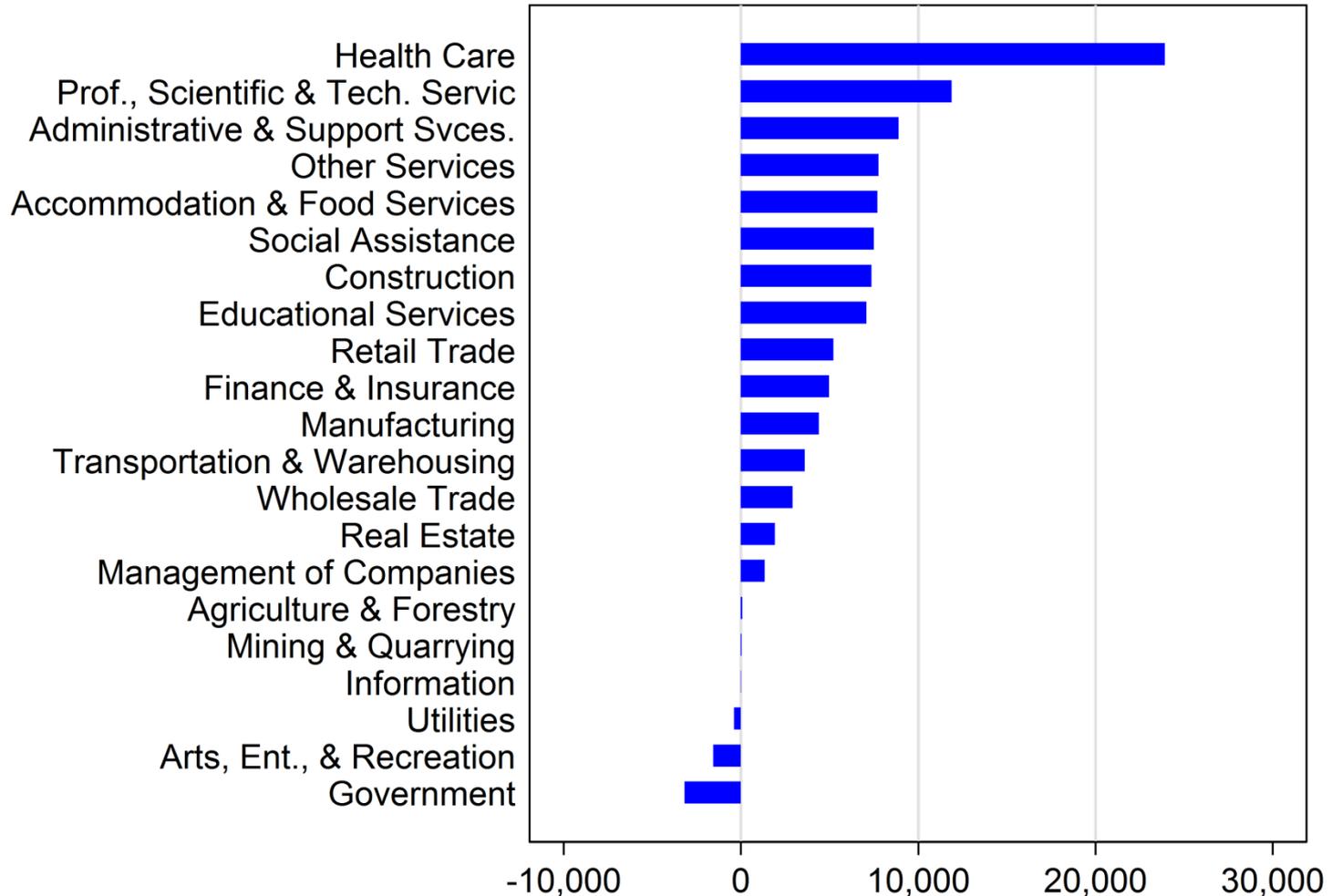


12-17-14 ©2014 Scott Adams, Inc. /dist. by Universal Uclick



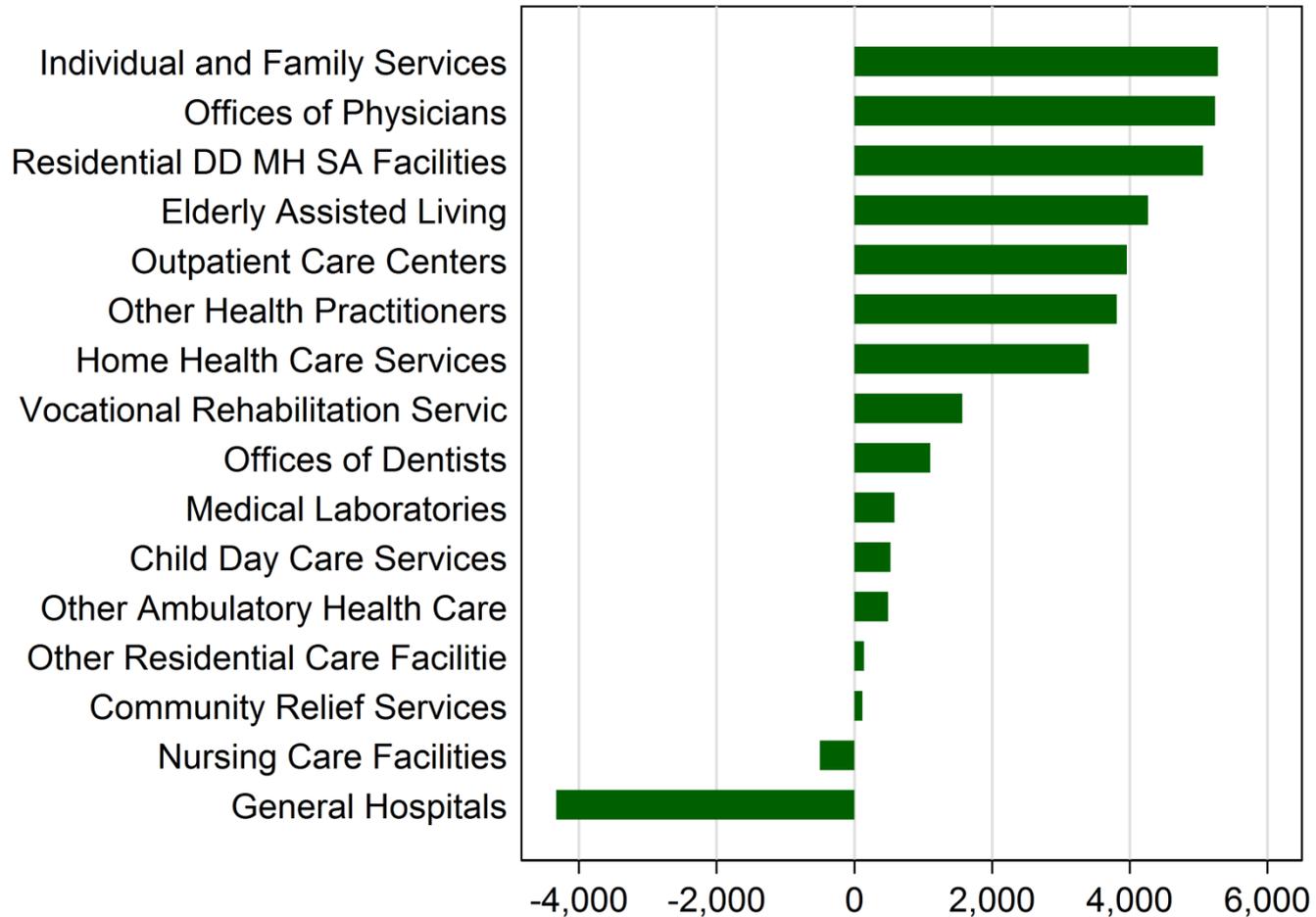
Connecticut Projections

By Industry 2014 to 2024



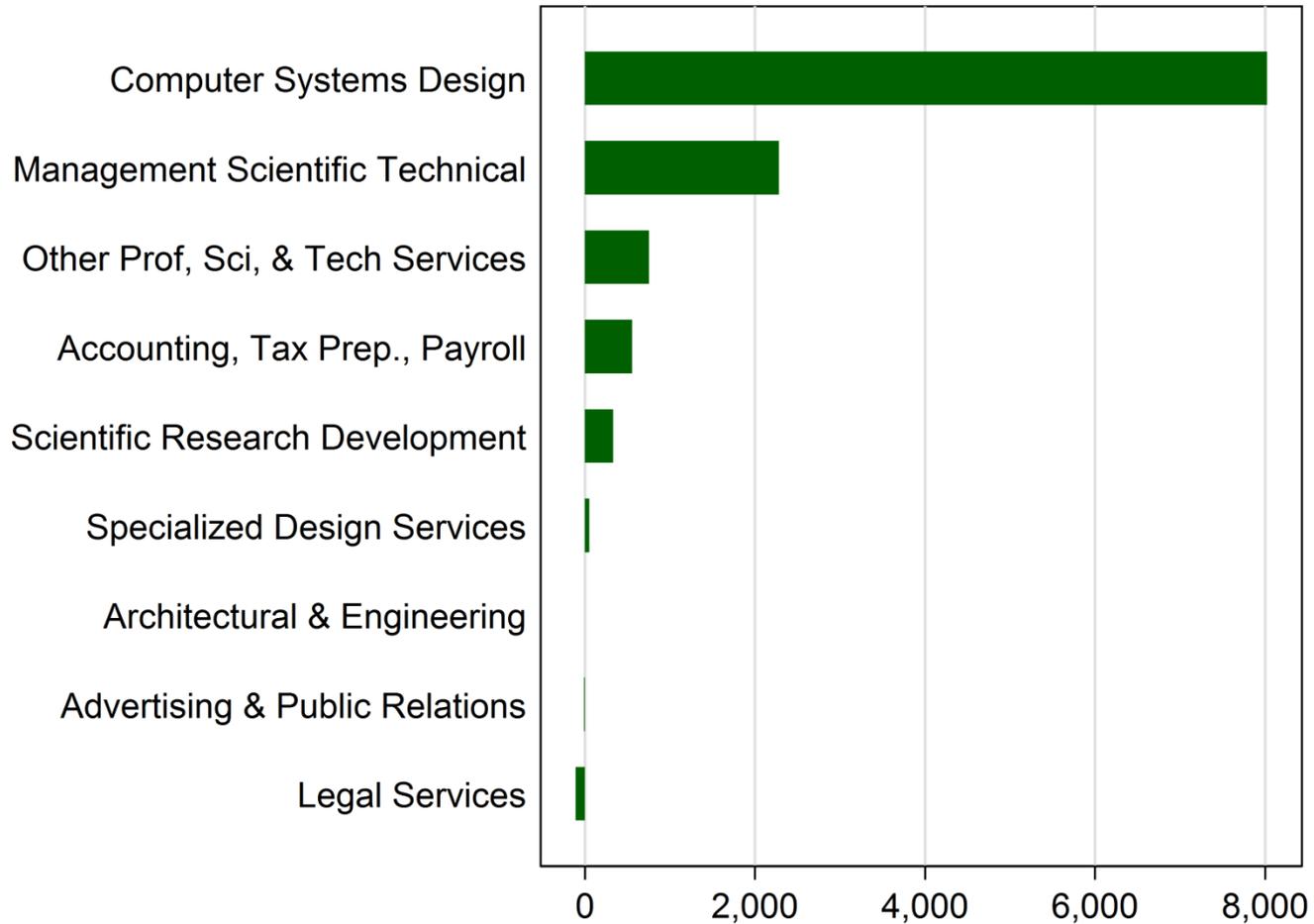
Connecticut Projections

Health Care Employment 2014 to 2024



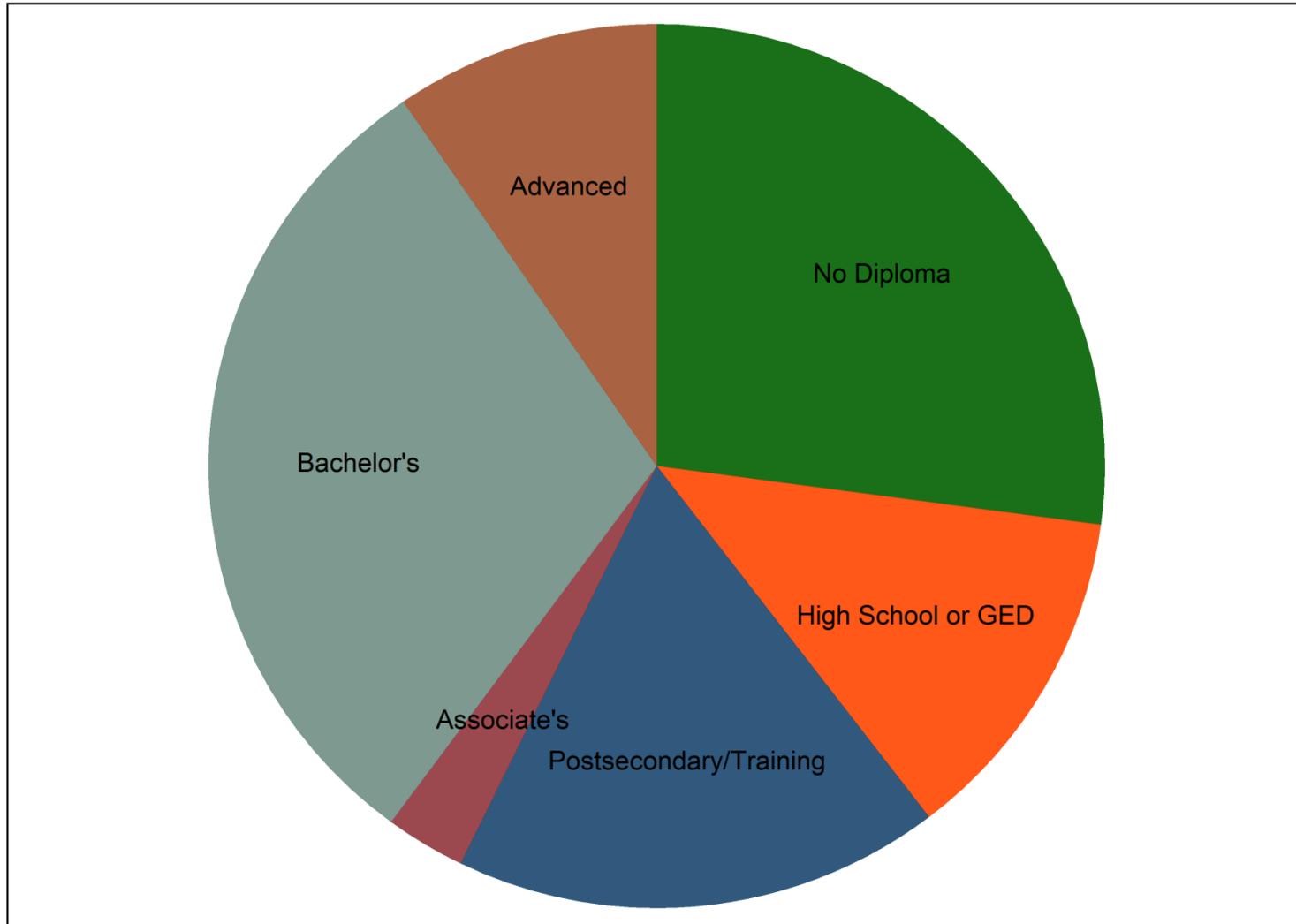
Connecticut Projections

Professional Services 2014 to 2024



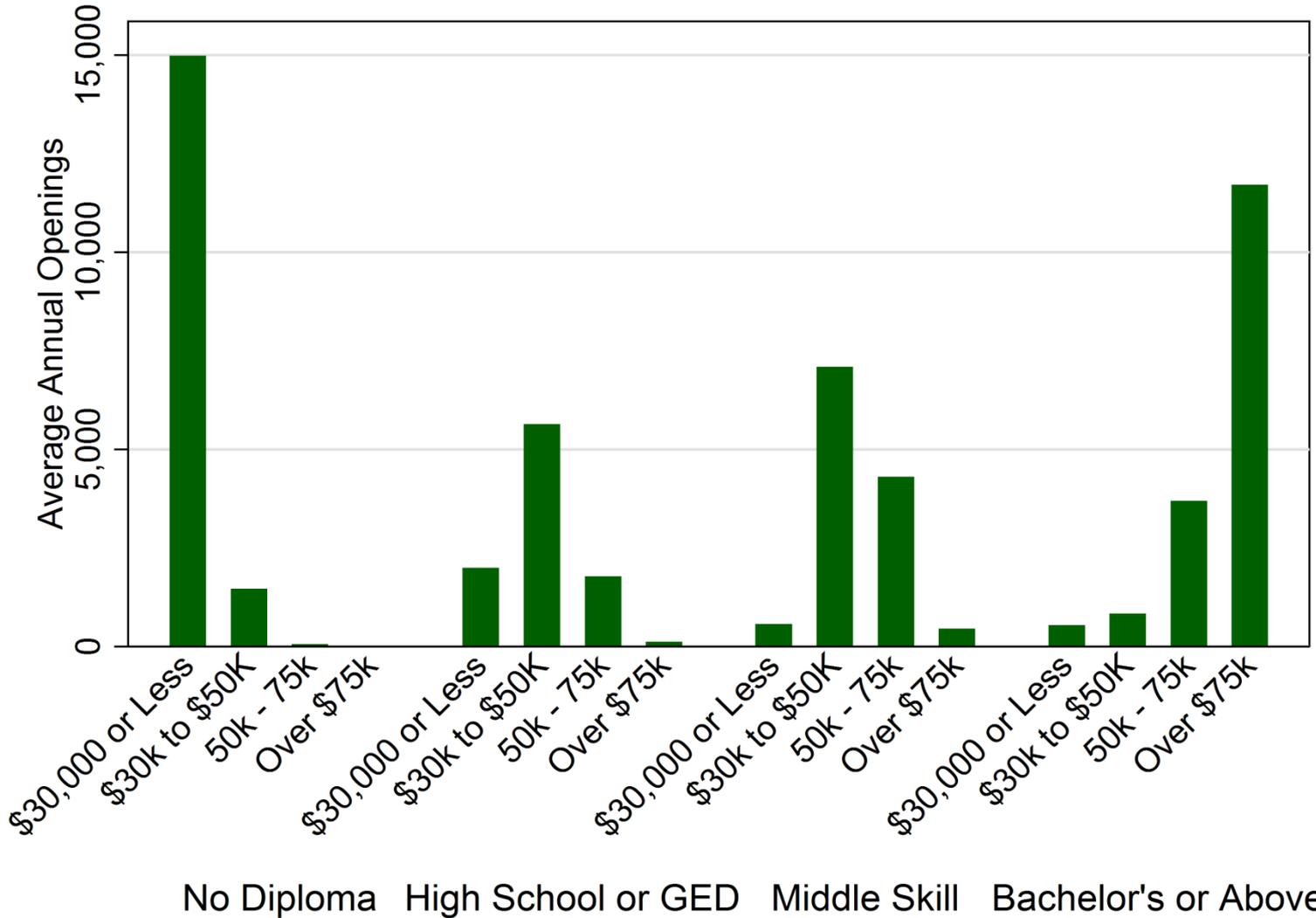
Connecticut Projections

Minimum Education for Growth Occupations 2014-2024



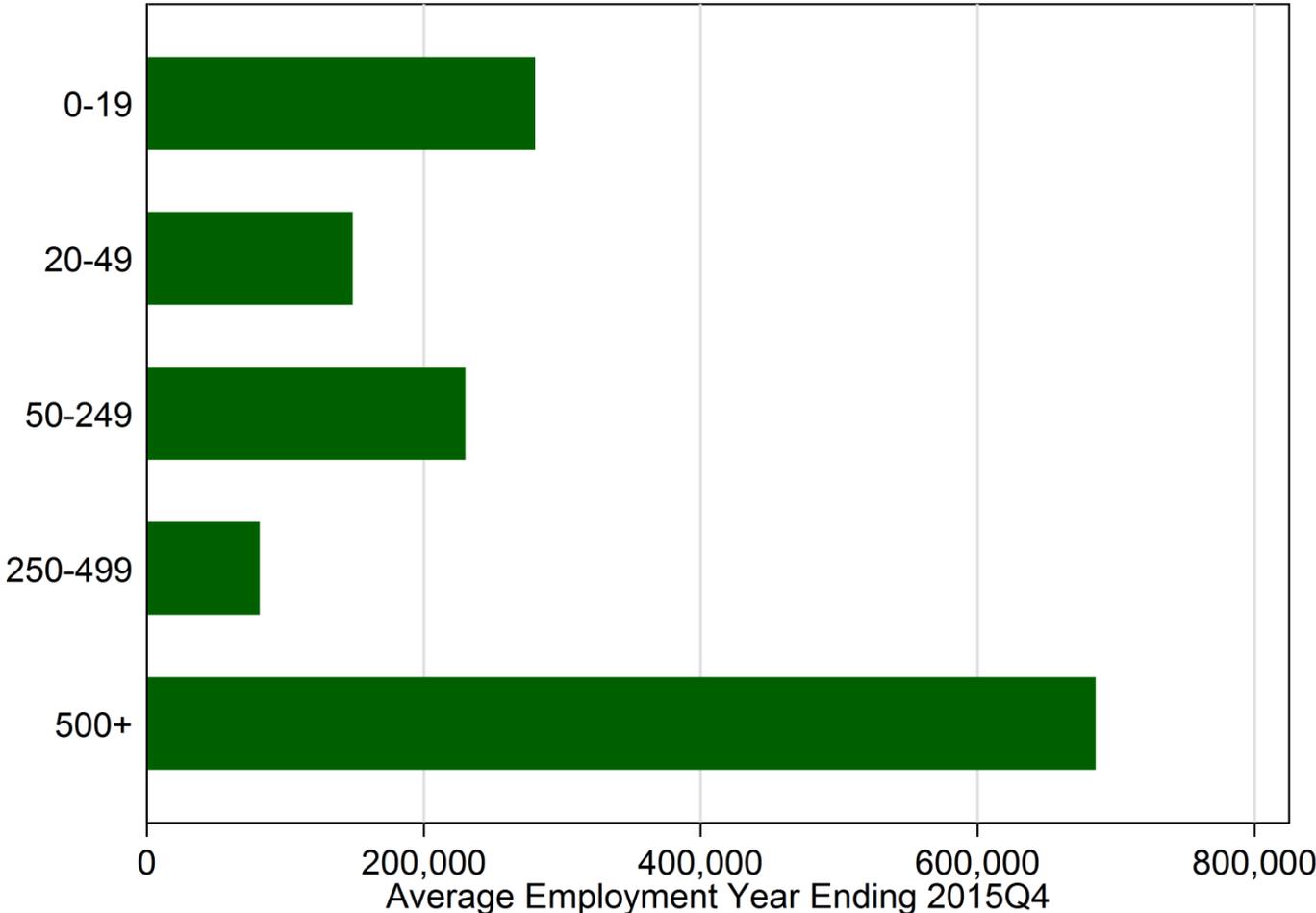
Connecticut Total Openings 2014-2024

by Median Wage & Minimum Education



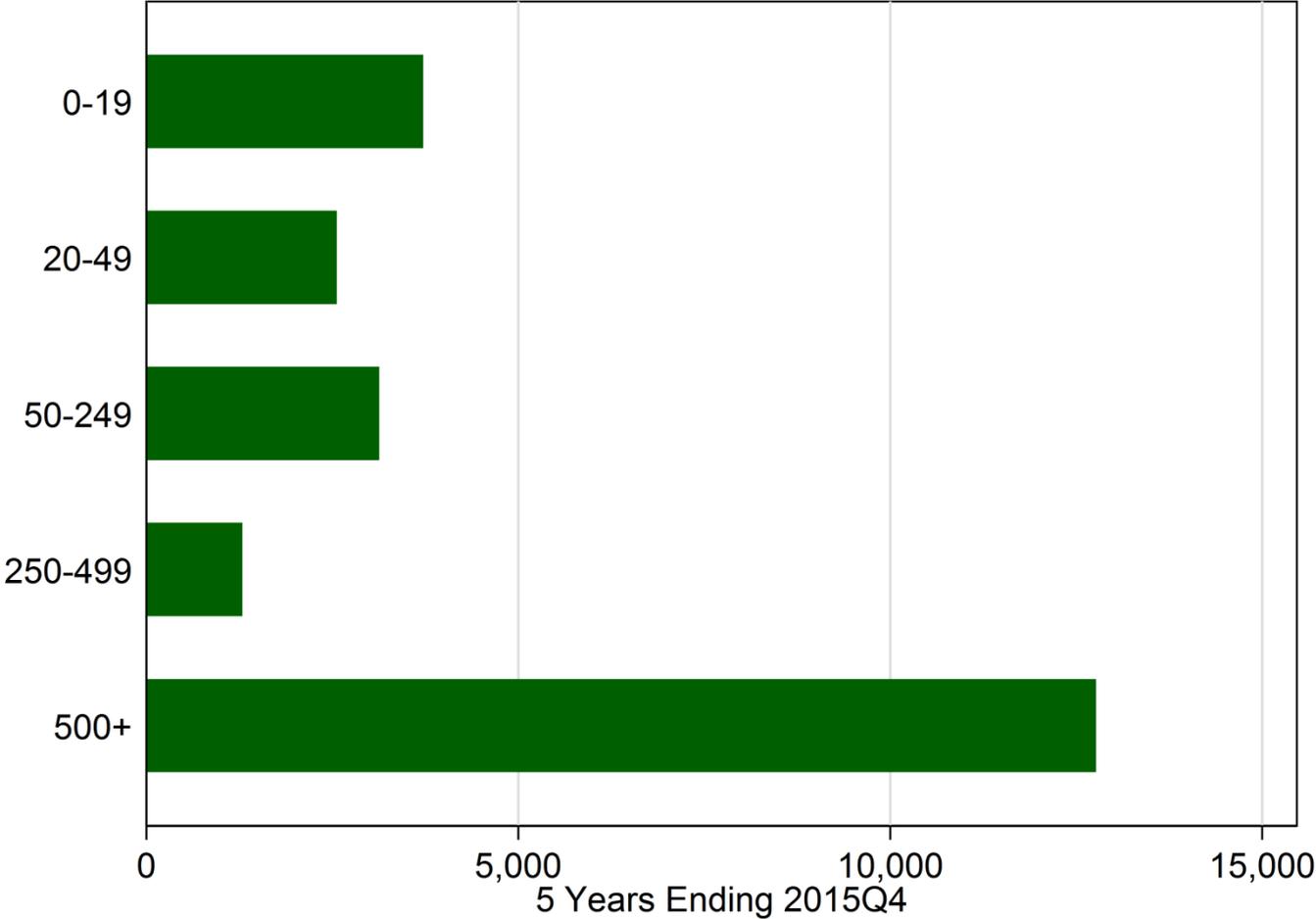
Connecticut Employment

by Size of Firm



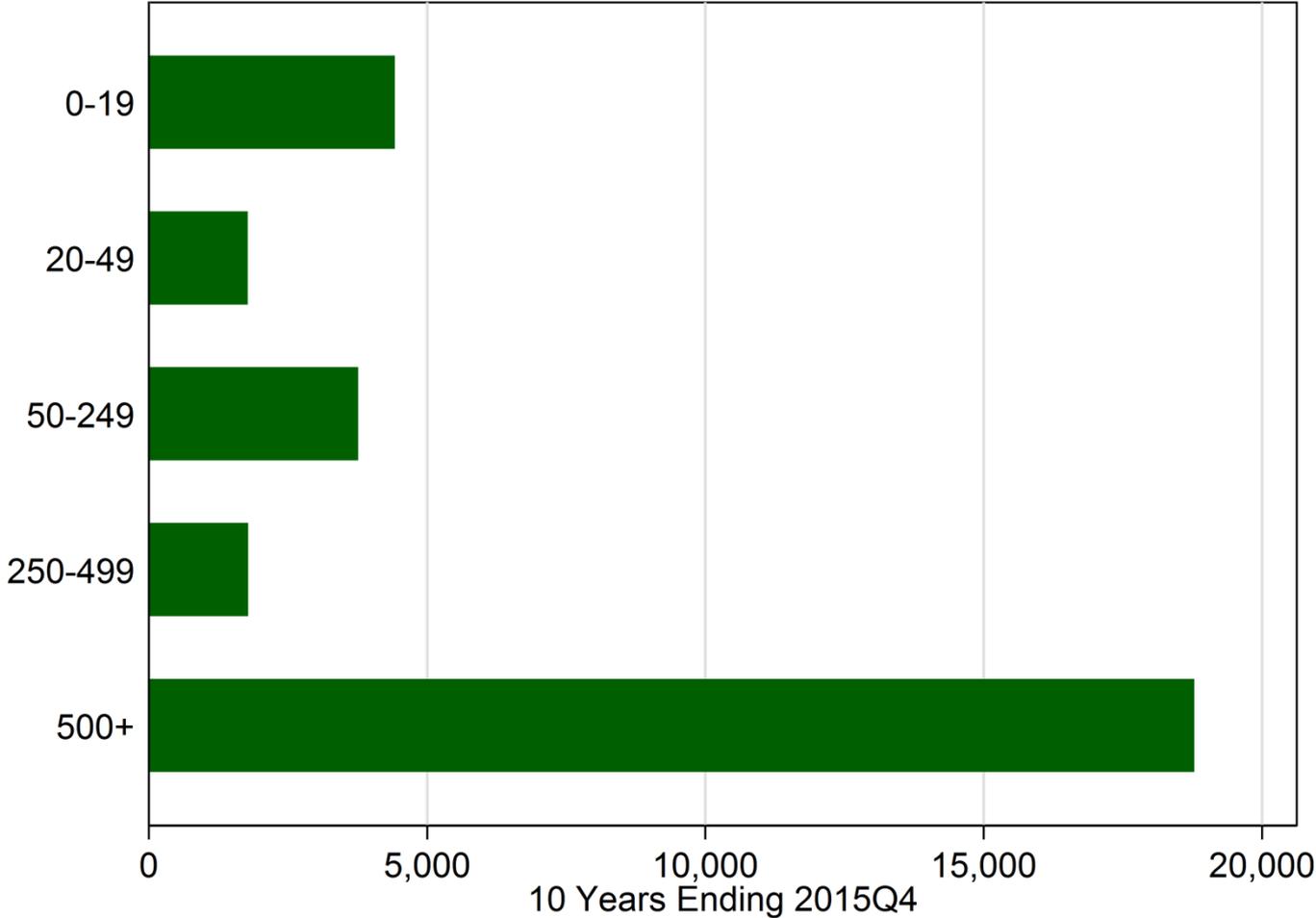
Connecticut Employment Change

by Size of Firm



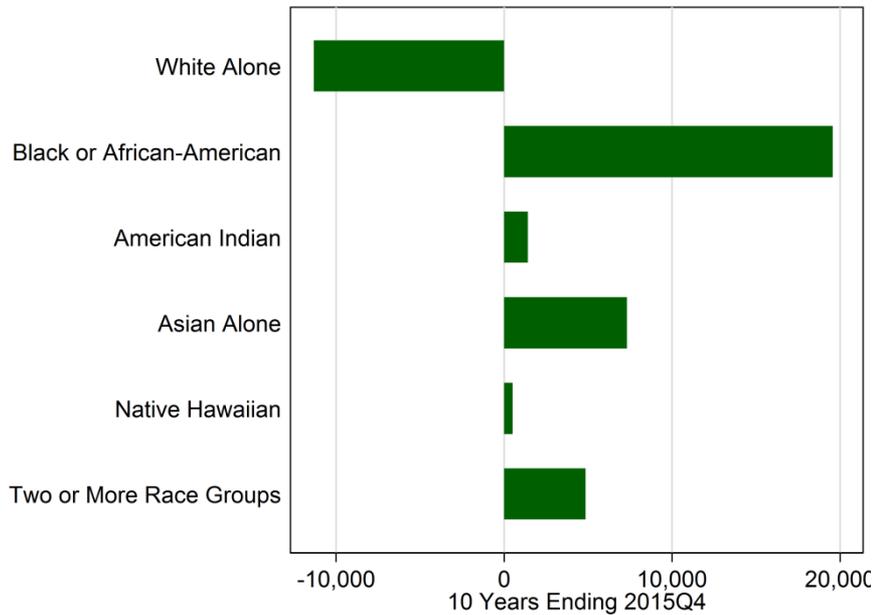
Connecticut Employment Change

by Size of Firm

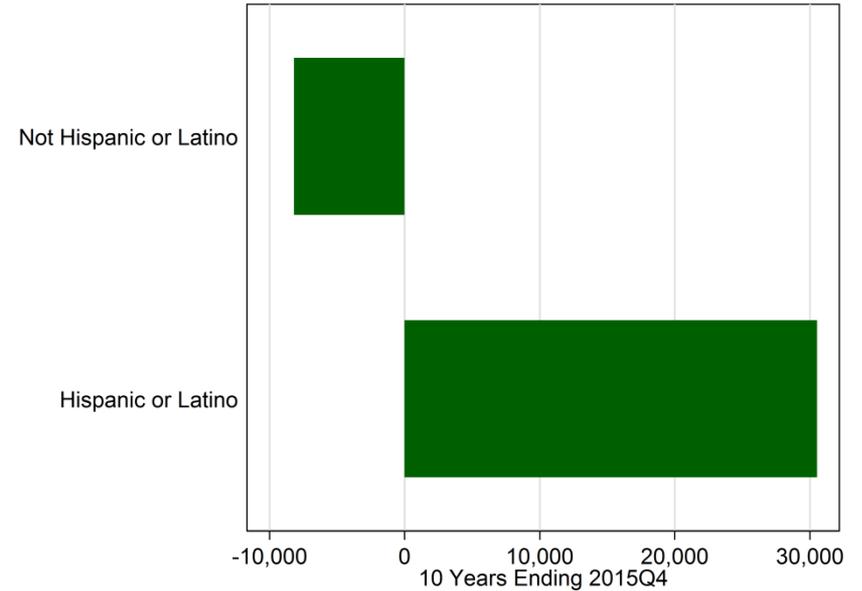


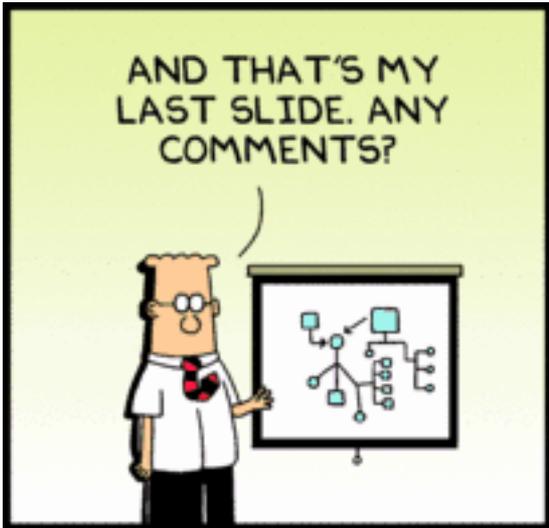
Connecticut Employment Change

By Race



By Ethnicity

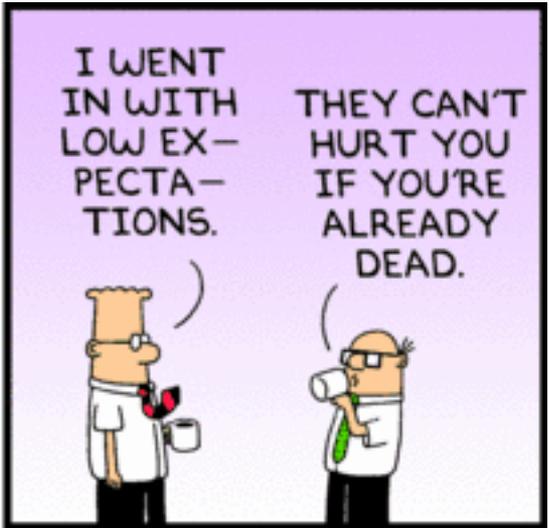




Dilbert.com DilbertCartoonist@gmail.com



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From: Bentsen, Todd
To: Bentsen, Todd
Cc:

Sent: Wed 9/21/2016 5:35

Subject: August 2016 Labor Force Data for State of Connecticut Labor Market Areas & Towns

Message  aug2016laborsit.pdf (436 KB)  august2016glance.pdf (163 KB)  cedsep16.pdf (357 KB)  August2016BusChanges.pdf (241 KB)  august2016laus.pdf (23 KB)
 CTAffirmAction-2ndQtr2016.pdf (465 KB)



Connecticut Economic Digest

Every month the Economic Digest provides the most current economic data available for Connecticut. Decision-makers from many arenas are better informed because the Digest makes it possible to follow the trends and understand the status of economic forces that influence Connecticut's labor markets. We are pleased to continue providing information that is useful in making decisions, setting plans, and engaging in informed conversation. Go to www1.ctdol.state.ct.us/lmi/ctdigest.asp



Connecticut Labor Market Information At-A-Glance

The Office of Research gathers, analyzes, and disseminates information on the economy, workforce and careers that is used to evaluate the economic health of Connecticut, to support and promote state workforce development activities, and to assist students and job seekers in making career choices. At-A-Glance is a monthly pamphlet that contains the latest updates for data items most frequently requested. Go to www1.ctdol.state.ct.us/lmi/ataglance/ataglance.asp



Connecticut Labor Situation

Highlights changes from both a month and a year earlier in unemployment, nonfarm employment, and changes over-the-year for manufacturing wages and hours for the State and its nine labor market areas. Other economic indicators for CT, such as seasonally adjusted nonfarm employment, average weekly initial claims for unemployment insurance, the unemployment rate, and average manufacturing weekly hours, are listed by month for the entire previous year up to the current period. Go to www1.ctdol.state.ct.us/lmi/laborsit.asp



Connecticut Business & Employment Changes Announced in the News Media

This publication lists start-ups, expansions, staff reductions, and layoffs reported by the media, both current and future. The report provides company name, the number of workers involved, date of the action, the principal product or service of the company, a brief synopsis of the action, and the source and date of the media article. Go to www1.ctdol.state.ct.us/lmi/busemp.asp



Connecticut Department of Labor

Office of Research

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www.Facebook.com/CTLMI & @DOL_Research on Twitter

Office of Connecticut State Treasurer Denise L. Nappier



2017 Public Finance Outlook Conference

Protecting Your Town from Cyber Hacking and Theft

Panelists:

David Geick, Director, IT Security Services

Bureau of Enterprise Systems and Technology

Christopher Hauser, 2nd Vice President, Cyber Risk

Travelers Companies, Inc.

Jack McCoy, Chief Information Officer

Town of Manchester

Moderator:

Catherine E. LaMarr, General Counsel

Office of the Treasurer

Schedule of Presentation

- You've Been Hacked!
- Proper Preparation Prevents Poor Performance
- Pay Me Now or Pay Me [More?] Later
- Q & A

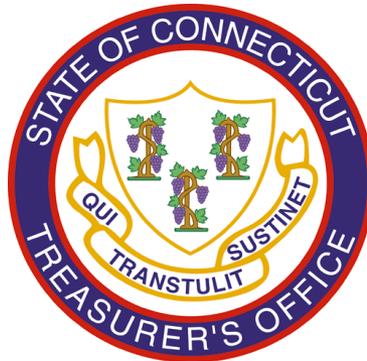
Resources

- **Cybersecurity Checklist for Cities**
 - <http://www.ott.ct.gov/Cashdocs/CybersecurityChecklistforCities.pdf>
- **Mitre Co STIX TAXII List**
 - <http://www.ott.ct.gov/Cashdocs/MitreCoSTIXTAXIIList.pdf>
- **Cyber Guide**
 - <https://www.travelers.com/travelers-institute/cyber/resources/cyber-guide.aspx>
- **Cyber Risk Pressure Test**
 - <https://www.travelers.com/quiz/cyber-security/cyber-risk-pressure>



Thank you!

Office of Connecticut State Treasurer Denise L. Nappier



2017 Public Finance Outlook Conference